Pathways to Agroecological Market Inclusion for Peri-Urban Farmers in Berazategui, Argentina

By

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Abstract

Argentina is home to the largest population of Bolivians outside of Bolivia, the majority of whom have settled within the Buenos Aires Metropolitan Area (AMBA). A high concentration of Bolivian migrants practice diversified horticultural family-scale farming within AMBA's peri-urban zone (the buffer area between urban and surrounding rural areas). Aside from segmented producer organizations, peri-urban farmers are largely fragmented and excluded from opportunities for market integration. This project was a result of a partnership between Dr. Amanda Crump's Research Group on Agricultural Equity at the University of California, Davis, Dr. Gustavo Tito at Argentina's National Agricultural Technology Institute (INTA) and Dr. Percy Nugent at Arturo Jauretche National University. Together, we explored avenues for community and political organizations to promote agroecological market integration in Berazategui, Argentina, located in the southern peri-urban zone of AMBA. Using participatory methodologies, we evaluated existing barriers to market expansion for peri-urban farmers and strategized which social alliances would be essential in improving equitable and agroecological market access. This research was conducted with the following objectives:

- To assess the current realities of producers as they work to commercialize their products and gain access to local market opportunities.
- To generate a better understanding of the role of social alliances in supporting commercialization for agricultural producers in Berazategui.
- To provide space for producers to exchange ideas on how to strengthen and promote local agroecological market inclusion.

Findings showed that the municipal and federal government must support farmers with basic needs (such as land tenure) as a prerequisite for engagement with agroecology and improved

marketing opportunities. Market intermediaries must also be replaced with either direct marketing opportunities or expanded producer organization roles that populate the entire production chain with producer allies and ensure fair prices for all. Finally, consumers can be educated to serve as allies and advocates for producers. This research collaboration supports the goals of INTA's *ProHuerta* family farmer program, which promotes agroecology, food self-sufficiency, farmer inclusivity and market integration, especially for vulnerable farmers. INTA hopes to convert AMBA's peri-urban zone into a "green belt" of agroecology and food production. This goal is increasingly relevant as the impacts of climate change and COVID stress the need for more localized, diversified, and equitable food systems.

In loving memory of Nazhone Wilkins, Baila Pransky and Matt Fisher.

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List of Abbreviations

AMBA	Área Metropolitana de Buenos Aires (*Buenos Aires Metropolitan Area*)
CEA	Centro de Educación Agraria (*Agricultural Education Center*)
CEDEPO	Centro Ecuménico de Educación Popular (*Ecumenical Center of Popular Education)*
INTA	Instituto Nacional de Tecnología Agropecuaria (*National Agricultural Technology Institute*)
IRB	Institutional Review Board
MTE	Movimiento de Trabajadores Excluidos (*Excluded Workers Movement*)
UCB	Unión Campesina de Berazategui (*Berazategui Farmers Union*)
UN FAO	Food and Agriculture Organization of the United Nations
UTEP	Unión de Trabajadores de la Economía Popular (*Union of Workers of the Popular Economy*)
UTT	Unión de Trabajadores de la Tierra (*Union of Land Workers*)

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Introduction

There is growing interest in how to utilize peri-urban spaces in Argentina to cater to the nutritional and ecological needs of the country. “Peri-urban” signifies the transition zones between urban and rural areas, often retaining both urban and rural characteristics, particularly with regards to agricultural activities (Allen, 2010). The peri-urban zone surrounding the Buenos Aires Metropolitan Area (AMBA) of Argentina is a highly marginalized area of diverse horticultural production, vulnerable to the simultaneous urbanization from the urban core and spread of industrialized soybean production from the rural periphery (Cardozo et al., 2020).

As a result of this land demand, farmers in AMBA’s peri-urban areas typically lack land tenure due to dual urban/rural land pressure, have sub-standard infrastructural services, and are particularly vulnerable to climate-related shocks such as increased flooding and the out-flow of city waste (Cardozo et al., 2020). There are some limited networks of producer-formed organizations, but many do not connect farmers to centralized markets or urban consumers. AMBA’s peri-urban farmers are largely fragmented and excluded from opportunities for added value and market integration due in part to disconnect from federal extension support and an overall lack of land tenure in these areas (Cardozo et al., 2020). As a rudimentary definition, “extension” refers to the dissemination of technical knowledge to farmers, traditionally through universities or federal agents (Lubell et al., 2014). This term will be further explored in the literature review.

One strategy that can assist farmers in these peri-urban areas is agroecology. After the inauguration of President Alberto Fernández in 2019, there has been a resurgence of funding dedicated to agroecology throughout the country (Argentine Government, 2021). Argentina’s federal extension agency, the National Agricultural Technology Institute (INTA) formed a

partnership with the recently formed peri-urban National University of Arturo Jauretche to explore how to better protect and promote agroecological farming in the southern peri-urban zone of AMBA. This collaboration supports the goals of INTA's *ProHuerta* family farmer program, which promotes agroecology, food self-sufficiency, farmer inclusivity and market integration for vulnerable farmers, particularly small-scale family farmers ("*ProHuerta*," 2021). It is important to note that the new government's embrace of agroecology contrasts that of the previous administration and is central for *ProHuerta* to advance in its activities and mission (Gago, 2018). INTA hopes to convert AMBA's peri-urban zone into a "green belt" of agroecology and food production.

Between April and June of 2022, I conducted participatory research in collaboration with INTA and the National University of Arturo Jauretche. This research centered on understanding the role of social capital in facilitating farmer access to local markets within the context of promoting the transition to agroecological farming practices. As a preface to this thesis research, the below literature review explores existing efforts to promote agroecology in peri-urban Argentina, along with the importance of social networks of influence for peri-urban farmers in the southern zone of AMBA. Below, I define agroecology and extension while providing background on the Argentine-specific contexts of these fields. I then describe an emerging theoretical framework, along with my methodological approach. Finally, I conclude with the findings of the participatory activities and a discussion of how these findings can be applied to the context of peri-urban AMBA farming.

Literature Review

I begin this literature review by describing the context that necessitates a transition to agroecology in peri-urban AMBA, along with the challenges that peri-urban AMBA farmers face

in accessing local markets. The Buenos Aires Metropolitan Area (AMBA) is expanding at a rapid rate, with the highest levels of urbanization in Argentina. Argentina is one of the most urbanized countries in the world, with 92% of its population living in urban areas, and Buenos Aires is the most populous city in the country, home to 39% of Argentina's total population (Bolay, 2020). AMBA is growing at a rate of about 1% each year, which places immense pressure on its peri-urban areas. Outside of cities, Argentina's farmland is mostly owned by transnational corporations and used for industrialized soybean production for export; it is the third largest soybean producer in the world (Leguizamón, 2016). Argentina's soybean industry is a result of an extensive history of neoliberalism, where loans through agencies such as the International Monetary Fund (IMF) were extended to the Argentine government to support export-oriented economies, specifically the agro-industrial production of soybean (Leguizamón, 2016; Undurraga, 2015). This neoliberal focus, prioritizing economies for export over more localized economies or services to support Argentine citizens, eventually led to an economic crash in 2001, leaving a scar on the Argentine economy that continues to this day, with inflation rates at nearly 100% as of February 2023 (Bianco & Soria, 2023). With a focus on soybean production for export, Argentina's farmland predominantly serves the interests of transnational corporations rather than supporting the socioeconomic needs of Argentine citizens (Torrado, 2016).

Amidst this neoliberal landscape of soybean for export, Argentina has experienced high rates of "hidden hunger," or micronutrient deficiencies, as many citizens cannot afford expensive imports of fruits and vegetables (Cardozo et al., 2020; Dubbeling, 2014). Peri-urban spaces are seen as an avenue for supplying fruits and vegetables to urban populations, especially given the fact that peri-urban spaces are already used for diversified horticultural production. Utilizing

peri-urban zones is also seen as a strategy for reducing climate change-related issues (such as flooding and the urban heat island effect) (Cardozo et al., 2020). Buenos Aires' peri-urban zone is not only impactful given the size of the city, but also for supporting Bolivian migrant communities.

Argentina is home to the largest population of Bolivians outside of Bolivia, the majority of whom have settled within the peri-urban zones of AMBA (Parodi, 2018). These migrant communities are often disconnected from government support systems due to land tenure issues (an issue called the "Bolivian horticultural ladder," which I review below), and are simultaneously vulnerable to climate change issues (particularly increased flooding amidst poor infrastructure services) and the out-flow of waste from cities (Cardozo et al., 2020). Because of land pressure and lack of access to extension resources, these farmers over-use agricultural inputs, specifically pesticides, which contributes to peri-urban land degradation and the soil's ability to absorb heavy rains – in essence contributing to the flooding cycle (Baldini et al., 2021; Eandi et al., 2021). To address the complicated issues of hidden hunger, climate change, soil degradation and land tenure, INTA has looked to the concept of agroecology as a potential solution for these peri-urban farmers.

Agroecology

The federally sponsored, country-wide initiative to support diversified peri-urban horticultural production is rooted in the promotion of agroecology. It is important to note that agroecology scholarship has historically overlooked urban or peri-urban spaces under the assumption that there is little room for agroecological incorporation (Hammelman et al., 2021). Whereas the definition of agroecology was initially focused on sustainable agricultural and ecosystem management, the concept has evolved to include a focus on interlinked socio-

ecological processes and relationships. The definition of agroecology that INTA uses is that of the Food and Agriculture Organization of the United Nations (UN FAO):

> Agroecology is an integrated approach that simultaneously applies ecological and social concepts and principles to the design and management of food and agricultural systems. It seeks to optimize the interactions between plants, animals, humans and the environment while taking into consideration the social aspects that need to be addressed for a sustainable and fair food system. (UN FAO, 2018)

Furthering this definition, Anderson et al. (2019) explains that this more integrated approach can be thought of as domains of transformation towards agroecology, rooted in participatory dialogue and grassroots organizing. Transitions to agroecology occur through promoting local knowledge and culture, forming networks, promoting equity, and fostering discourse and exchange (Anderson et al., 2019). This integrated concept of agroecology directly addresses the intersection of needs within Argentina's peri-urban areas: local food security, land tenure, and ecosystem services (such as addressing increased flooding in the face of climate change), all of which require local input and discourse to support and unify the fragmented network of family farmers currently occupying marginal land surrounding Argentina's major cities (Castro et al., 2021; Baldini et al., 2021; Battiston et al., 2017). Within the context of Argentina, agroecology has also focused on the substitution of chemical inputs with more sustainable Indigenous practices, considering the dominance of the industrialized soybean industry and urban concerns about pesticide exposure (Dubbeling et al., 2014; Baldini et al., 2021; Battiston et al., 2017).

In addition, agroecology is deeply rooted in social movements, and has been cited as vital to the *Vía Campesina* movement, or peasant farmer movement, which originated in Latin America and has actively fought for smallholder and Indigenous farmer rights against large-scale

soybean land takeovers in Argentina (Leguizamón, 2016; Altieri & Toledo, 2011). *Vía Campesina* emphasizes that agroecology must center local food production and knowledge, much like with the above definitions of agroecology, but is careful to state that the definition of agroecology must be constantly up for debate to foster discourse (*"Agroecology, a Way of Life*," 2017). Given the locally defined, fluid nature of agroecology that is rooted in Latin American grassroots movements, along with the relative lack of applications of agroecology in urban and peri-urban settings, it is essential that the concept involve substantial community stakeholder participation to maintain transparency and avoid cooptation by institutions (Hammelman et. al, 2021). To illustrate this, I present the model example of agroecology in Argentina below.

Successful Reform: Rosario

Rosario, Argentina's third-largest city, can be used as a model for implementing transparent ecological initiatives in peri-urban Buenos Aires. Rosario is widely cited, not only in Argentina but globally, as an example of the reclamation of urban and peri-urban spaces for horticultural production ("Sustainable Food Production for a Resilient Rosario," 2020; Battiston et al., 2017; Hammelman et al., 2021; Allen, 2010). Like Buenos Aires, Rosario, situated northwest of Buenos Aires in the province of Santa Fe, is an industrialized port city experiencing rapid rates of urban expansion amidst a greater landscape of industrialized soybean production (Battiston et al., 2017).

Rosario experienced high food insecurity following Argentina's economic crash of 2001. As a response, the city partnered with INTA's *ProHuerta* extension program to promote agroecological, small-scale horticultural production. *ProHuerta* is a program run through INTA that supports vulnerable farmers, particularly family farmers, with the technical, social, and financial support needed to achieve food security and food sovereignty through agroecological

production ("*ProHuerta*," 2021). Municipal and *ProHuerta* personnel worked together to leverage any unused land (such as vacant lots and land surrounding highways) to promote the agroecological production of fruits and vegetables in order to support the dietary needs of lower-income residents. Following the success of this urban agricultural program, Rosario expanded its initiative in 2011 to develop the Green Belt Project to designate 800 hectares of peri-urban land for ecological horticultural production, including a 100-meter buffer around the city where agrochemicals are strictly prohibited (Ermini et al., 2017). Part of this commitment to agroecological farming practices was driven by overuse of agrochemicals by peri-urban farmers who were disconnected from federal extension technical support, coupled with consumer concerns over agrochemical use; these issues are also prevalent within the context of Buenos Aires.

The Rosario project functioned through three work streams; production (with participatory technical support focused on behavior change), social (supporting relationships amongst growers), and commercial (promoting peri-urban foods in markets with government labeling designed to provide transparency and appeal for urban consumers) (Battiston et al., 2017). The efforts in Rosario emphasized the importance of participatory approaches for behavior change, the creation of connections between urban consumers and peri-urban producers, along with institutional protections of peri-urban land tenure. Given that INTA is now interested in supporting peri-urban farmers in Buenos Aires who are experiencing similar issues that led to agroecological reform in Rosario, the participatory strategies used in Rosario can serve as best practices within the Buenos Aires context. Before expanding on how I applied a participatory framework to this research project, I first describe below how local extension practices necessitate this participatory approach.

Local Agricultural Extension

As mentioned above, this research was conducted in partnership with two extension representatives, Dr. Percy Nugent from Arturo Jauretche National University, and Dr. Gustavo Tito from INTA (a federal Extension agency). These extension agents were purposefully selected for partnership, as they work closely with peri-urban farmers in the study area and had interest in collaborating on this thesis project (refer to the *Research Context* section of this thesis for a more in-depth explanation of how I formed a partnership with these particular extension agents). For this thesis, it is important to understand what extension is and specifically how it is defined by Dr. Nugent and Dr. Tito, as this informs the rationale for the methodologies that we selected for this study. Traditionally, extension has been defined as a linear process, where technical information is transferred from universities or federal agencies to farmers (Lubell et al, 2014). However, this definition has evolved to include a reciprocal movement of information, where extension agents not only share knowledge with farmers, but work alongside with and gather knowledge from farmers to inform agricultural research and technology. In line with this evolved version of extension, a World Bank policy paper described that extension is not only a service (such as transferring information or technology) but a system that "includes all public and private institutions that transfer, mobilize, and educate rural people, as distinct from a service or single institution that traditionally provided advice only" (Feder et. al, 1999, p. 3). The policy brief expands on this broader definition of extension to describe that this mobilization process is best implemented in participatory ways with the support of farmer organizations to ensure widespread dissemination of benefits and accountability within a complex landscape of social actors involved with extension work (Feder et al., 1999, p. 23).

In line with the World Bank briefing, Lubell and colleagues describe how social networks must be considered in the dissemination and exchange of extension information in a form of extension referred to as "Extension 3.0." Extension 3.0 recognizes that in any given context, there will be unique social actors with varying degrees of influence and connectivity to other actors, and "highlights the importance of networks of actors who cooperatively work together to deliver relevant knowledge to the right people at the right time and place" (Lubell et al., 2014, p. 2). This version of extension centers on empowering stakeholders from all organizational levels to disseminate information through their own world lens, an inherently participatory process that challenges the traditional top-down extension approach.

Dr. Tito and Dr. Nugent practice a version of Extension 3.0, sharing with me that they prefer to use the term *"vinculación*," which roughly translates to "linking" or "connecting," rather than use the term "extension." According to Dr. Tito and Dr. Nugent, this *vinculación* approach is rooted in relationship-building for solidarity and mutual accountability. In support of leveraging social relationships for change, Dr. Tito and Dr. Nugent exclusively work with producers who are affiliated with a producer organization, discouraging individualism (Percy Nugent and Gustavo Tito, personal communication, April 2022).

One example of local *vinculación* is the *Aula Campo* (Field Classroom) program led by Dr. Tito. *Aula Campo* is a joint training program for local students and producers. University students are first connected with local producers, where they initially spend their time learning about producer experiences and needs. Students and producers then take a joint class where they co-learn about agriculture-related topics (such as sanitary requirements for post-harvest processing). Finally, students are paired with a producer to offer consultancy support. At the end of the course, the farmers evaluate the students, ensuring mutual accountability (MESTIZA

WEBTV, 2021; Gustavo Tito, personal communication, April 2022). This course promotes relationship-building between students and producers through participatory and horizontal extension strategies, ensuring that all stakeholders develop autonomous skills and a collaborative network. To best align with Dr. Tito and Dr. Nugent's *vinculación* framework, we chose to implement a participatory methodology, which I describe below.

Participatory Approaches and Social Capital

Within extension and rural development projects, there is evidence that participatory approaches, centering community members as experts and co-creators of knowledge, translate well to understanding the networking and needs of peri-urban producers, especially with understanding the role of social capital, or the impact of social relationships (Lubell et al., 2014). The case of Rosario, for example, centered on participatory technical support for peri-urban farmers, and the integration of peri-urban farmer feedback into municipal strategic planning ("*Sustainable Food Production for a Resilient Rosario*," 2020; Battiston et al., 2017). Chambers (1994, 1995) describes the concept of participatory development, recognizing that it is a difficult term to truly put into practice. As Chambers describes, many projects utilize a low level of participation, or use the term "participatory" as a baseless label to secure additional funding. However, true participatory development projects involve "an empowering process which enables local people to do their own analysis, to take command, to gain in confidence, and to make their own decisions. In theory, this means that 'we' participate in 'their' project, not 'they' in 'ours'" (Rodgers, 1994, p. 2). The "we" that Rodgers refers to are the outsiders to a community that typically run projects or impose their own assumptions, which he does forewarn is difficult to avoid even with the best of intentions (Rodgers, 1993). Rodgers goes on to explain

that this participatory approach to development is essential given that those who experience poverty or who are marginalized are extremely diverse with unique needs.

As Rodgers forewarns, participatory approaches can easily be co-opted by those in power, and it is difficult for an outsider (such as myself) to conduct truly participatory research, especially with research like this, conducted within the short timeframe of a master's degree program. Chavez et al. (2008) warns that in participatory projects facilitated by outsiders to a community, there are often "hidden transcripts" that are not shared with facilitators. This could be in part because participants do not feel safe sharing certain information, or they might share information that they believe facilitators want to hear, which may not be entirely representative of their lived reality.

Lubell and colleagues (2014) concur with Rodgers' call to acknowledging the diversity of communities, particularly their social networks that affect change. Applying this concept of social network diversity to the context of this study, Bolay (2020) argues that peri-urban initiatives in the Global South generally overlook collaboration with local social networks, particularly agricultural cooperatives. As mentioned above, achieving agroecology is inherently a participatory process, with domains of transformation including networking and dialogue (Anderson et al., 2019).

Flora and colleagues (2004) built upon Bourdieu's 1996 work to describe the concept of community capitals, or the different assets that must be balanced for a healthy and thriving community. Bourdieu first described that community assets are not limited to simply economic assets. One of these assets is social capital, which Flora and colleagues describe in their community capitals framework as "norms of reciprocity and mutual trust. Norms can be reinforced through a variety of processes: forming groups, collaborating within and among

groups, developing a united view of a shared future, building collective identity, and engaging in collective action" (Flora et al., 2018, p. 140). They describe that it is important to strengthen ties within social networks in order for a community to thrive. Participatory strategies can help to understand and leverage the unique social capital of peri-urban farming communities, particularly the social capital that some farmers experience from various networks and relationships (Flora et al., 2004). In Mexico, one study evaluated the role of social capital in promoting peri-urban farmer integration into local markets (Méndez-Lemus & Vieyra, 2017). The authors stressed that in peri-urban land, where territory is precarious in the face of competing land pressure, social capital is essential for farmer success. The most recent publication from Jauretche University and INTA focused on southern peri-urban Buenos Aires also stresses that farming systems are incredibly reliant on social capital, and that further studies should examine the influence of peri-urban social networks in promoting or hindering the conversion to agroecological practices (Nugent, 2021). Additionally, participatory approaches can help to understand the opportunities and barriers particular to Bolivian migrant farming communities, whose needs may diverge from other farmer groups across the country. For example, many Bolivian farmers are subjected to the "Bolivian horticultural ladder," where newer migrants lack the land tenure and decision-making power of more established migrants with more robust social capital (Benencia & Casadinho, 2009). Participatory strategies are not only central to agroecology, but to understanding and mobilizing the unique social structures of peri-urban farming communities.

Given the rapid urbanization of Buenos Aires and the simultaneous land pressure from industrialized soybean production, the city's peri-urban space is both increasingly vulnerable and essential for local horticultural production that supports a growing urban population. The

Argentine government is committed to promoting agroecology in this peri-urban zone, and the case study of Rosario shows the importance of participatory methodologies and trust-building between peri-urban farmers and local institutions like federal and university extension. Central to these participatory approaches is a need to understand the social realities and networks of peri-urban farming communities. Whereas there is research in Argentina that has shown the importance of social capital in peri-urban spaces, there is limited exploration of how social relationships can both promote agroecological transitions in peri-urban spaces while securing market opportunities for farmers. Given the need for participatory approaches and the prevalence of Bolivian migrants in peri-urban spaces, many of whom may primarily speak Indigenous languages, it is essential for a methodology that produces visual graphics that can transcend any language barriers (a concept supported by Rodgers). As social fragmentation in peri-urban spaces is thought to be a factor contributing to the lack of connectivity with the resources needed to farm in agroecological ways (Bolay, 2020; Barsky, 2010), it is important to gain a baseline understanding of social capital amongst Bolivian migrant farming communities before embarking on further interventions with these communities.

To that end, the collaborative and participatory research project presented in this thesis seeks to provide clarity on the role of social capital in supporting peri-urban, predominantly Bolivian migrant farmers to gain access to local markets in sustainable and equitable ways. Specifically, in this research I examine the ways that social alliances can be leveraged for agroecological market inclusion for peri-urban farmers in the study area of Berazategui. Below, I outline the local context for this research, the emerging theoretical framework guiding the project, the research participants, and the methodologies used. I then summarize the findings of two participatory activities and conclude with a discussion of how these findings connect to the

broader question of the role of social capital in promoting market inclusion and the transition to agroecology for producers in peri-urban AMBA.

Research Context

To conduct this research, I built on an existing relationship that I had with INTA. In 2014, I worked for INTA's Organic Agriculture Coordinator to develop a literature review of INTA's engagement with agroecology. I contacted this supervisor to see if INTA might have a project that they would like me to focus on for my thesis, and he connected me with Dr. Tito and Dr. Nugent, based on my interests surrounding migrant farmers and the fact that they were scaling up extension work with local farmers at the time. Therefore, these extension agents served as my key points of contact both out of convenience (through the connection with my former supervisor) and out of purpose (my supervisor identified them as key experts conducting novel and relevant work in the study area). Dr. Nugent and Dr. Tito worked with me remotely over the course of a year, sending me relevant literature and informing me of their ongoing extension efforts so that I could develop a complementary and relevant thesis project. In line with participatory scholarship, I intend to co-publish with these researchers. It is important to note that I am an outsider to this context who is reliant on the collaboration with these extension experts. Below, I describe my own positionality and the aligned work of the Argentinian collaborators that make this research possible.

Positionality Statement

No data or research is unbiased, as it is analyzed and summarized through researchers with unique lived realities and perspectives. Thus, it is important that I recognize my own positionality in relation to this research to understand any bias, influence, or limitations that result from my engagement with community members, data analysis and the narrative of this

thesis. I am a white, young, middle-class, cis female citizen born and raised in the United States. I also have educational privilege, having a bachelor's degree and completing my master's degree. Although most Argentinians in AMBA are white Europeans, most of the farmers in the study area are non-white descendants of Indigenous Bolivian or Paraguayan communities. Whereas I study International Agricultural Development and have worked on farms for supplemental income, I do not come from a farming background, nor do I understand the reality of relying on farming as my primary livelihood. Therefore, adaptive strategies that may seem feasible to me may be entirely unfeasible for producers.

Working internationally as a white researcher from the United States feeds into global power dynamics. It is important to note that Argentina's micronutrient deficiencies that led INTA and Jauretche University to work closely with peri-urban farmers to produce horticultural goods for local consumption is in large part due to U.S.-backed neoliberal development efforts, resulting in industrialized Argentine soybean production for export. I recognize that, as a white person from the United States, I step into a complex legacy of U.S.-led development efforts that in many ways perpetuate colonialism through resource extraction and a "West-is-best" mentality. This neocolonial dynamic is especially prevalent when working with predominantly Indigenous Bolivian migrants, as many Bolivians are displaced from their homelands due to the harms of U.S.-led resource extraction and land displacement (see Figure 1 below). I also recognize the extractive nature of my own engagement with peri-urban farmers, as I conducted field work and then left on an airplane to complete my thesis without the ability to develop long-term community trust and accountability for action-oriented research. I therefore am extremely dependent on the trust formed between INTA and Jauretche University collaborators.

Figure 1: Elon Musk responding to allegations of an attempted coup on the president of Bolivia, an example of U.S. neocolonialism in Latin America (Musk, 2020).

Most of the industrial inputs that farmers buy (such as pesticides, fertilizers and farm machinery) are purchased using U.S. dollars, which are inaccessible compared to the Argentine peso, which is especially weak (as of writing this thesis at the start of 2023). For perspective, I found that average rates for renting a room in the nearby city of La Plata for a month cost only $100 USD per month. Simply the ability to fly on an airplane from the United States to Argentina is a privilege many Argentinians cannot afford. Representing a country with immense relative economic privilege could impact how willing producers were to trust me with their unfiltered thoughts. For example, I made a comment to a producer about how wonderful it would be to facilitate further collaboration between Arturo Jauretche University and UC Davis to compare approaches to research and exchange research findings, and the producer quickly reminded me that there is nothing comparable about the U.S. and Argentine agricultural or economic realities; this producer had a family member who farmed in California and taught me that we in the United States could not imagine the amount of privilege we have in comparison to Argentina, or the amount of impoverishment that peri-urban farmers can face, and that it would

be futile to compare our farmer research. My tendency, as with many, was to compare Argentina to what I am familiar with in the United States, which will likely be prevalent in this thesis as well to connect with U.S. readers, and may in many ways underrepresent or gloss over the nuances of the lived realities of peri-urban Berazategui farmers.

As mentioned above, my credentials as a researcher with a U.S. institution also gave me unwarranted power. During my last visit to Argentina to work with INTA in 2014, I was new to the field of agriculture, with very little knowledge of the subject matter, and yet I was invited to present my work to the highest-ranking leader at the local research station - privileges that likely would not have been granted to another student with as little experience as myself. I recognized that I needed to approach this research with great care to reinforce the concept that producers and other research collaborators were the experts, not me (although I knew that power imbalances would never fully disappear). Furthermore, this research project marked the first time that Jauretche University had partnered with a U.S. University, which meant that I would likely be perceived as the only point of reference for U.S. behavior, opinions, and priorities. The neoliberal agenda also positions the United States as the goalpost for development, and as someone who represented the United States, I needed to be careful that what I said was not interpreted as either a representation of all U.S. opinions, or as a superior opinion.

Although I am a highly proficient at the language, I am not a native Spanish-speaker, which serves as another barrier towards relationship-building and representation of local realities. Whereas I have studied in Argentina in the past, I am not intimately familiar with the local idioms or dialect of Lunfardo (a mixture of Italian and Spanish words that are used in Buenos Aires). Whereas I did have Dr. Nugent and Dr. Tito as resources to ask questions about

what I may have missed, there is a high possibility that I did not understand certain key comments, particularly towards the earlier observational phase of this research.

Having been raised in U.S. culture, I am accustomed to a particular notion of social efficiency. For example, meetings either start and end at relatively concrete, predetermined times (a meeting scheduled to go until 12:00 PM would likely not run more than 10 minutes over time), or typically last no more than an hour. Introductions are normally conducted via email. In the United States, these norms are typically seen as being respectful for the limited time of others. This was not the case with my experience in Argentina, as social interactions lasted far longer than in the United States, and social capital (relationship-building) seemed to hold more weight. It was not uncommon for meetings to last upwards of two to three hours, and often meeting participants seemed to stay for as long as they were interested and showed respect through continued conversation and curiosity. Throughout the span of conducting field research, I often was overly ambitious with my research plans, hoping to conduct interviews with a list of over 10 questions, not realizing that conversations would often go on for more time than expected per research question, and farmers were also busy with other, often overlapping, relationship-building commitments taking up their already limited free time outside of farm work. I found myself jumping to research questions during the observational phase rather than committing myself to developing relationships and trust, which was imperative given the power imbalances that I represented. There were several interactions through the first half of my fieldwork that I initially regarded as unproductive that in fact facilitated richer data collection and discussion during the participatory activities.

Concurrent Complementary Projects

As this research was co-designed with extension partners at Jauretche University and INTA, it was intentionally planned to complement existing efforts from local extensionists, the municipal government and Berazategui community members. Below, I describe concurrent work at the time of this research, along with the partners that I collaborated with. The following information I gathered through both direct observations and personal correspondence with Dr. Nugent and Dr. Tito.

INTA Project: Agroecological Tomato and Sweet Potato Trials

During my time in Argentina, INTA was collecting feedback from producers about participatory on-farm field trials of tomato and sweet potato varieties. I attended two feedback sessions where INTA and farmers convened to discuss the trials; the following is based on what I learned in these meetings. For the tomato trial, INTA researched tomato varieties that could be grown as both fresh market and processing tomatoes, and then distributed these seeds at a reduced price to producers to test on their farms. The requirement for this trial was to grow the tomatoes without agrochemicals (in an agroecological way). Extension representatives then held a forum with farmers and tomato industry representatives to share feedback about the trials (CEDEPO workshop, personal communication, April 20, 2022). With support of a subsidy, the tomatoes were then sold to industry representatives at a price that was slightly cheaper than average market rates, but more expensive than the prices that peri-urban family farmers normally experienced. Two farmer cooperatives who typically grow with conventional agrochemicals tested out the tomato varieties and found that they produced a high quantity of quality tomatoes, even with abnormal weather events due to climate change. Industry representatives also enjoyed the tomato variety and the experience of working directly with producers. The industry

representatives shared that it would be challenging to obtain their needed quota of tomatoes from an assortment of different producers, which raised the question of how to organize direct relationships between small producers and industry representatives in equitable ways, without simply favoring producers who can fulfill the entire industry order.

During these meetings, farmers also strategized on how to equitably support one another to reduce costs and increase efficiency for growing INTA sweet potato varieties. Many farmers found it difficult to estimate how many slips (vine cuttings used for transplanting) they needed to order, resulting in an excess of slips, which they then shared with other producers. The group brainstormed the idea of designating one or two producers in the area to be responsible for growing all of the plant slips and distributing them to other farmers who would pay for their time and labor. The group decided to circle back to this conversation in the future to ensure that no producer becomes overburdened. The group seemed excited about establishing their own sweet potato nursery instead of relying on INTA to send out slips each season, reflecting a clear overarching theme of desiring localized economic autonomy.

Municipal Project: Berazategui 2050

The municipal government of Berazategui (in partnership with Jauretche University) was concurrently working on a project called Berazategui 2050, a participatory effort to create sustainable local development through supporting and integrating the different productive sectors of Berazategui's economy. As a major element of this project, they are establishing a *Polo Agrario* (Agricultural Hub) in El Pato (a predominantly agricultural area of Berazategui). This hub will include technical knowledge transfer (including land for field experiments and demonstrations), direct relationships with industry representatives, sustainability programs (such as composting and recycling) and a value-added center (for post-harvest processing and

bottling). An overarching goal is to support farmers in the transition to agroecology (Bera2050, 2021). Given the expensive cost of industrialized inputs, which farmers need to purchase in USD, the *Polo Agrario* is also working to set up a local form of cryptocurrency that will be tied to the Argentine peso and can be used for purchasing farming inputs. Construction on the value-added center is planned to begin by the start of 2023, and the hope is that producers will lead the demand for what they would like to see at the *Polo Agrario*, with a producer representative serving on an advisory board for both the *Polo Agrario* and the broader Berazategui 2050 project (serving other economic and service sectors in the municipality) (Berazategui municipal government representatives, personal communication, April 29, 2022).

Community Project: Mesa Agraria

During the pandemic, the community of Berazategui came together to create the *Mesa Agraria* (Agrarian Board) as part of the *Nodo Solidario Mercado Berazategui* (Berazategui Market Solidarity Node) which meets monthly. There were twenty nodes that were established at the start of the pandemic to address community needs, which reduced to two main nodes as the pandemic progressed. During the onset of the pandemic, consumers became more interested in sourcing local food and worked with producers to set up a *bolsones* program. "*Bolsones"* refers to large bags of assorted produce. Through the *Mesa Agraria*, these *bolsones* are given out to the community in accessible locations at affordable prices. *Mesa Agraria* meetings also serve as entry points for extension and municipal representatives to share information with a representative collection of producers and interested consumers (Percy Nugent and *Mesa Agraria* members, personal communication, April 2022).

Methods

Research questions and thesis project scope were designed in partnership with Dr. Gustavo Tito from INTA and Dr. Percy Nugent from Jauretche University from January 2021 to March 2022 via Zoom and email. Dr. Nugent and Dr. Tito's work was extremely unpredictable during this time, as Argentina experienced strict lock-down due to COVID, which disrupted normal extension outreach and marketing activities. Once it was safe to travel for myself, the extension contacts, and the agricultural producers (who received access to COVID vaccinations much later than in the United States), I traveled to Argentina. Data were collected during a two-month period (April 1, 2022 to May 30, 2022) in Berazategui and the neighboring city of Florencio Varela (described below in more detail).

During this period of field research, INTA and Jauretche University were amidst the process of collecting exhaustive data from producers in AMBA's southern peri-urban zone, including Berazategui, to understand farmer demographics, marketing, production challenges, and current and potential engagement with agroecological farming practices. As research partners, Jauretche University and INTA were hoping to avoid producer survey fatigue (in addition to fatigue from involvement in other concurrent projects), so we avoided long-form interviews or questionnaires, and instead primary data were collected through informal conversations during field observations and two participatory activities that took place in conjunction with meetings that producers were already planning to attend. I was lucky enough to have the support of Dr. Tito and Dr. Nugent, who both spent years cultivating mutual respect and trust with participating farmers. Dr. Nugent and Dr. Tito were careful to vet my research questions and introduce me to producers well before participatory activities to generate as much trust and familiarity as possible.

Research Questions

Given the gap in what researchers and extensionists know about local access to social capital and the constraints that peri-urban AMBA producers face in implementing agroecological farming practices and accessing local markets, as detailed in the literature review, this research sought to answer these overarching questions:

- What are the avenues for social influence and change that facilitate agroecological market integration for peri-urban farmers in Berazategui, Argentina?
    - What current marketing opportunities are producers participating in, and which social alliances have supported these farmers in gaining access to these markets?
        - What existing marketing opportunities and supportive allies are most important for producers?
    - What are existing barriers to agroecological market inclusion? What social alliances could help to overcome these barriers?
    - What are potential agroecological market opportunities that farmers could engage in, and what social alliances could support farmers in gaining access to these opportunities?

Study Area

Berazategui (population 324,244) is situated in the southern peri-urban zone of Buenos Aires, in a marginalized area of both urban activity and agricultural production between Buenos Aires and the nearby city of La Plata, the capital of the Buenos Aires Province (Figure 2) (Berazategui Municipalidad, 2022).

Figure 2: Location of Berazategui in relation to Buenos Aires and La Plata (Google, n.d.).

Whereas the primary study area was Berazategui, the initial observational phase of this research was conducted in both Berazategui and the neighboring area of Florencio Varela, where Jauretche University and its local producer fair is located. Producer organizations and extension projects often span the divide between the two cities, and farmer realities are in many ways similar in both locations. There are four main differences between Florencio Varela and Berazategui producers. First, Florencio Varela producers are closer to Jauretche University and can more easily access the Jauretche produce fair. Second, the pandemic negatively impacted municipal and community efforts to support Florencio Varela producers, pausing many collaborative extension projects with the municipal government (a partnership which began in 2015/2016). In contrast, consumers and municipal government representatives in Berazategui became more interested in supporting producers during the pandemic (Percy Nugent and Gustavo Tito, personal communication, April 2022). The municipal government started working in earnest with INTA and Jauretche University in 2020. Third, Berazategui contains the 10,248-hectare Pereyra Iraola Biosphere Reserve (referred to as *Parque Pereyra*), which was designated

a UNESCO Biosphere Reserve in 2007 (UNESCO, 2020). The park serves as farmland for around 200 farmer families, includes 16 hectares of experimental land for farming trials and demonstrations, and includes the *Centro de Educación Agraria* (Agricultural Education Center), a center for education for local farmers where many extension meetings take place,. In theory, all producers within *Parque Pereyra* should be growing in agroecological ways (although the definition of "agroecological" is not strictly defined or enforced). The significance of this park positions the municipality of Berazategui to be more aligned with agroecology. Finally, consumers in Berazategui on average have higher access to the financial resources needed to procure local produce during the onset of the pandemic. This is especially true for the area of Berazategui called El Pato, which is located at an extremity of the municipality where most farmers are located. In El Pato, there is extreme wealth disparity. As an example of this disparity, there is a gated country club located immediately next to extremely marginal farmland with limited access to basic infrastructure, such as reliable roads. Because El Pato is located at the extremity of the municipal boundaries, farmers are further marginalized due to the challenge of transporting goods to the city center (Percy Nugent and *Mesa Agraria*, personal communication, April 2022).

Below is a map (Figure 3) of the above landmarks within the study area (note: although there may be a significant amount of green space on this map, much of the riverbank is protected land that cannot be used for farming) (Percy Nugent, personal communication, April 2022).

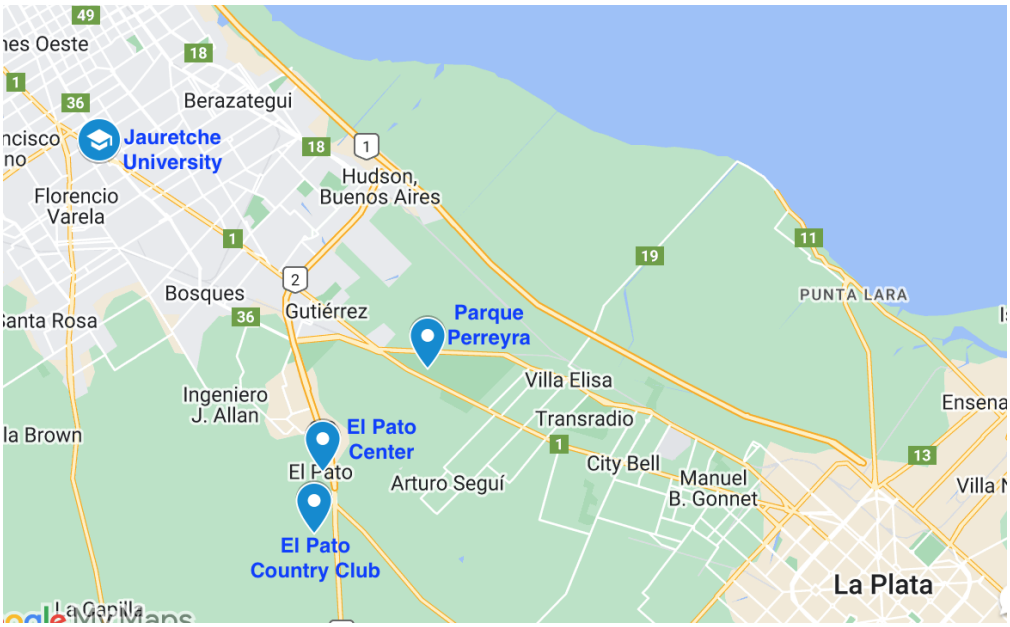

Figure 3: Significant landmarks within the study area (Google, n.d.).

Data Collection: Field Observations

Given that I am an outsider to the study area, Dr. Nugent and Dr. Tito decided that I should spend the first half of my research time accompanying them to agricultural stakeholder meetings and joining them on their routine extension farm visits. During this period, I refined my central research questions and theoretical framework, piloted the questions that I would later ask during the participatory activities, took copious notes, and kept an observational journal. The field observations included the following, which I recorded either with an audio recorder or on a notepad and later transcribed to Microsoft Word:

- Narrated driving tours with Dr. Nugent and Dr. Tito throughout Berazategui to learn about existing land use.
- Bi-monthly farmers' markets that Dr. Nugent and Dr. Tito established and coordinated at Jauretche University (mostly attended by farmers from Florencio Varela).
- A regional family farmer forum with local producer organization representatives and representatives from the municipal and federal government.

- Extension visits to five farms in Berazategui, representing four different producer organizations.
- Farmer meetings at *Centro de Educación Agraria* (CEA) (the local extension center at *Parque Pereyra* agroecological park mentioned above).
- Meetings with local municipal representatives.
- Visit to a producer-led seed-saving bank.
- Visit to a producer-led nursery.
- Meetings with other graduate students conducting socio-agricultural research in Berazategui and Florencio Varela.
- Meetings with the Berazategui *Mesa Agraria* (Agrarian Board), a representative association of local consumers, producers, students, and other allies for supporting Berazategui producers.
- Producer meetings with Jauretche and INTA to discuss tomato and sweet potato on-farm seed trials.

Data Collection: Participatory Action Research

Co-Researchers: Producer Organizations

Originally, I planned to conduct research with individual producers, but this approach changed to working with producer organizations as the unit of analysis. Most producers are associated with producer organizations. As mentioned above, Dr. Nugent and Dr. Tito nearly exclusively work with producers who are affiliated with a broader organization as a way of encouraging collectivism and solidarity. Producer organizations were selected as co-researchers to align with existing research and partnerships, as well as to build on the collective action of these organizations.

During the field observation period, I learned that producers attend meetings not as individuals, but as representatives of their affiliated producer organization. Often, producer representatives would be relatively silent during meetings, either writing notes or taking a video of the meeting, because they were absorbing information to bring back to their organization before coming to a consensus and reporting back on behalf of the collective. All of the Berazategui producer organizations that I met with during the observational phase of the research were present for at least one of the participatory activities.

For recruitment, producer organizations in the study area that partnering extension personnel typically worked with were invited by extension personnel to attend the participatory activities, either during field visits or over a WhatsApp group chat. Both participatory activities described below occurred in conjunction with other meetings (such as the meeting to debrief about tomato varieties), which also helped to recruit attendees, decrease barriers for attendance from producer representatives and reduce their obligation to activities outside of their normal work. Below is a description of the producer organizations who collaborated in the participatory activities for this research project.

MTE (Movimiento de Trabajadores Excluidos / *Excluded Workers Movement*). MTE is a national cooperative that was founded in 2002 by unified informal trash collectors in Buenos Aires (shortly after the 2001 economic collapse) (Villanova, 2014). According to the MTE website, their purpose is as follows:

> The Excluded Workers Movement is a social organization unifying thousands of people who were discarded from the formal workforce as a consequence of neoliberalism. We

> invented our own work in the popular economy to survive and found that popular organizing allows us to dignify our work and living conditions. (MTE, 2017)[1]

MTE has eight branches to unify different job sectors, ranging from trash collectors to rural workers, and offers support for women empowerment, health, and capacity-building. MTE also created the *Unión de Trabajadores de la Economía Popular* (UTEP, or the Union of Workers of the Popular Economy[2]), which fights for worker rights and transformations that will ensure that future generations have access to land, housing, and work (MTE, 2017).

Whereas MTE does have an organization-wide document that promotes the transition to agroecology, the MTE farmers in Berazategui practice conventional farming (with synthetic agrochemicals). I attended two farm visits with one Bolivian MTE farmer who tested the INTA tomato seed varieties, requiring this farmer to grow without agrochemicals in a more agroecological way (a requirement of participating in the seed trial). The farmer found great success with the trial of these tomatoes, permitting him to sell these tomato varieties to an industrial tomato processor. The farmer requested to purchase additional seeds to give to six other MTE farmers from Berazategui who saw how successful he was with his initial trial and wanted to test out the varieties on their own farms.

During my stay in Argentina, the MTE farmer mentioned above reached out to INTA because he was experiencing some pest issues that his agrochemicals were not mitigating. Dr.

[1] I translated from Spanish text on the MTE website.

[2] Popular Economy is a term typically used in reference to Latin America and the informal economies that resulted as coping mechanisms for the neoliberal economic exclusion of marginalized communities. After the 2001 economic collapse in Argentina, many were forced to imagine new economic ways of being for survival. "This new proletarian landscape combines cooperation and exploitation based on bonds of trust, migrant economies, market networks, family workshops and remunerated reproductive tasks, linked to incomes from illegal and 'underground' economies. For this reason, the protagonists of these combinations cannot simply be categorized as 'excluded,' as 'marginal' or as a mere 'surplus population'" (Gago, 2018, p. 32). Popular economies empower those who neoliberalism fails, including small-scale producers who cannot compete with the transnational agroindustry stakeholders that neoliberalism favors.

Tito walked through his farm to point out existing-on farm resources that could be used in agroecological trials to improve yields, such as fermenting a solution made from manure from the farmer's pigs and chickens to use as a biological soil amendment or making a solution with soap and the onions the farmer was growing to deter pests. The farmer agreed to set aside a plot of land to test out these agroecological practices, and mentioned that his neighbors, also part of MTE, were all awaiting his results to see if they would like to try agroecological techniques as well. The farmer agreed to work with Dr. Tito to set up a field demonstration for the farmer's neighbors once the trial was ready. Throughout the two-month period of my visit to Argentina, the farmer was consistently invited to broader Berazategui farmer meetings to share his experience growing the tomato varieties and establishing a trial for agroecological pest management.

12 de Agosto. 12 de Agosto is a Berazategui-based cooperative of three generations of Bolivian horticultural producer families (22 producers in total). They are relatively well-established (the main farm leader operates a medium-sized plot of land of about five hectares[3]). The cooperative is trying to acquire a plot of land for communal farming for its members. Like MTE, these farmers are entirely conventional, but the lead farmer tested out the INTA tomato variety with zero agrochemicals on his farm, also with much success. He also shared with Dr. Tito that he was experiencing nematode issues on his farm (which Dr. Tito told me is a pervasive problem in high-tillage conventional farming systems), which his existing chemical treatments were not solving. Dr. Tito suggested using crop rotations with arugula (a crop that the lead farmer decided would serve his marketing needs) combined with a solution made from garlic.

[3] For reference, small peri-urban horticultural farms in the study area are generally 1 to 2 hectares. Medium farms are around 5 hectares, and large farms are 10+ hectares (Percy Nugent and Gustavo Tito, personal communication, April 2022).

Like with MTE, the 12 de Agosto farmer will test out the agroecological practices and then invite surrounding farmers to a field visit to learn about his experience (12 de Agosto lead farmer, personal communication, April 2022).

Guadalquivir. Guadalquivir is not a farming cooperative, but rather a farming association (it is not legally recognized by the state) consisting of small and medium-sized, mostly Bolivian producers in La Plata and Berazategui. The majority of farmers in this association practice agroecology whenever possible, although it is not a standard practice across the organization (the organization only recently started focusing on agroecology). A main rationale for practicing agroecology for these producers is to connect with their Indigenous Bolivian farming roots (Guadalquivir representatives, personal communication, May 9, 2022).

UCB (Unión Campesina de Berazategui / *Berazategui Farmers Union*). UCB is a farmers union based in Berazategui consisting of farmers who exclusively practice conventional farming with very little engagement in local markets. The farmer representative from this organization was outspoken at every producer meeting that innovations would not be feasible on her farm given how already-stretched she is with business-as-usual operations, along with infrastructural issues. For example, the UCB farms in the area are struggling with salt water due to local overdraft from aquifers, which has caused their yields to suffer. They agreed to spread the word about the INTA tomato seeds but felt that they could not implement field trials with their limited time and resources. The representative UCB farmer had an off-farm job and hoped that her children could grow up to find other opportunities that would not require them to farm. This representative seemed to speak on behalf of farmers who are isolated and unable to strengthen organizational power. These realities, along with comments from Dr. Nugent and Dr.

Tito, suggested to me that UCB is relatively loosely affiliated organization (UCB representative, Percy Nugent, Gustavo Tito, personal communication, April 2022).

Asociación de Medieros y Afines ASOMA (ASOMA Sharecroppers Association). ASOMA is an organization that was founded in 1987 to support sharecroppers in the province of Buenos Aires who supply horticultural perishable products to the cities of Buenos Aires and La Plata (Valtariani & Velarde, 2012). Whereas I did not visit any farms associated with Asoma, Dr. Tito and Dr. Nugent identified Asoma members as some of the most disenfranchised stakeholders that they work with, as they do not have access to their own land and lack cohesive organization. A representative from this association participated in the second participatory activity, and whereas he did not share much during the activity, he did express to me individually after the second participatory activity that he felt that formalized cooperatives can be too bureaucratically inflexible and restrictive.

UTT (Unión de Trabajadores de la Tierra / *Union of Land Workers*). UTT is a national organization (spanning 20 provinces) that is arguably the strongest farmer union in the country. The union has 22,334 registered farmer families. According to the UTT website, they are a national organization of small producer and peasant families who fight for a more just and egalitarian society through food sovereignty (UTT, n.d.). "We choose access to land. We propose fair trade, we choose to build and fight firmly, tirelessly and with dignity for a better world. For everyone" (UTT, n.d.).[4] The organization prides itself on its democratic, horizontal structure, with local delegate representatives that meet on both a regional and national level.

[4] I translated this from Spanish text on the UTT website.

In Berazategui, UTT members have both individual and communal land, along with a plant nursery, transportation team, market coordinators, produce fairs, and brick-and-mortar produce stores (it is common in Argentina to have a separate produce store, called *verdulería*). UTT farmers also generally know how to conduct their own soil tests. UTT promotes agroecology along with seed-saving, and any organization-specific market typically will not allow for producers to partake unless their products are free of agrochemicals (which they refer to as agrotoxins). UTT is extremely politically active; when I visited, they were working through a second attempt at passing a law to improve land tenure rights for family farmers (personal observation, April 2022). The organization also holds local meetings to set fixed prices to support producers and ensure equal opportunities for all. UTT had the strongest voice in the participatory activities, both with clearly defined organizational stances on any questions that I asked, and in terms of the number of representatives sent on behalf of the organization. One UTT farmer in the study area tested the INTA tomato variety and was also working with Dr. Tito on agroecological trials for nematode prevention. However, this farmer shared that the other UTT farmers in the area felt that INTA should be equally working with them (INTA had helped the aforementioned UTT farmer with soil tests to diagnose the nematode issue, which normally costs money for farmers); the organization prides itself on collective and equal autonomy (UTT farmer representatives, Gustavo Tito, Percy Nugent, personal communication, April and May 2022).

Now that I have described the research context, how the research questions were developed, and which producer organizations collaborated in the research, I will describe the participatory research activities.[5]

[5] This research is approved by the Institutional Review Board (IRB) and Committee on the Use of Human Research Subjects at University of California, Davis. This approval process required that I submit the scope of my research along with all research questionnaires and protocols, including protocols for obtaining informed consent form participants and safeguarding participant confidentiality. My positionality did create some tension for obtaining

Methodology: First Participatory Activity[6]

For the first participatory activity, representatives from three producer organizations (Guadalquivir, UTT and UCB) were in attendance. A subcontractor for the municipal government organizing the *Polo Agrario* (Agricultural Hub) of the Berazategui 2050 project also called for a meeting the same morning in the opposite side of town, which they promoted via social media that weekend. Due to transportation and time constraints, many producers were unable to come to our participatory activity in the afternoon.

This first participatory activity was structured to facilitate participation of all producers, regardless of literacy levels, and to paint a picture of the current commercialization landscape, existing commercialization challenges, prospective marketing opportunities, and the role of social capital in securing access to existing markets and in supporting with potential market expansion.

As a first step, participants were asked to share out which markets they were currently participating in, and Dr. Tito wrote these out in a matrix on the board. Producers volunteered whether these channels were exclusively for agroecological produce, which Dr. Tito also indicated on the board. Participants then shared which market channel(s) were the most important for them. Next, each producer organization was given three sticky notes (a different color sticky note for each organization), where they were asked to write out the names of three allies that helped them to gain access to these existing marketing opportunities, drawing one to

participant consent in line with IRB standards for this study. According to my research partners, delving too far into the topic of consent, or asking for signatures from participants could be perceived as suspicious, in part because there is not a norm of obtaining written signatures for this type of research. To address this challenge, I obtained oral consent from participants and explained that asking for consent was a norm from the US. I also explained that responses would be reported in aggregate by producer organization, not by individual producers, and that no producer names would be shared in any research reports. Given the nature of the research and my existing approval through the UC Davis IRB, I did not need to comply with an equivalent approval process in Argentina.

[6] The full protocol for the first participatory activity can be found in the appendix.

three stars on each sticky note, ranking allies from the most important (three stars) to the least important (one star) (Figure 4). We chose to implement this first step as an intra-organizational activity to ensure that producers felt more comfortable about sharing their thoughts as a collective. We provided examples (such as INTA and Jauretche University) to help generate an understanding of examples of allies (in pilot testing of questions, farmers struggled to think of allies without first hearing an example). As we situated these allies on the board, producers discussed why they chose the rankings that they used. Throughout the activity, producers shared challenges and barriers for accessing market opportunities.

For step two of the activity, producer representatives collectively shared aloud ideas of potential marketing opportunities that they would like to be engaged with. Each producer organization was then each given three additional sticky notes, which they used to write down the top three alliances that could be helpful in gaining access to these potential marketing opportunities, ranking again from one to three (most important) the level of importance that each alliance would have in securing these marketing opportunities (Figure 5). At this point, we concluded, because producers were running out of time, and we invited everyone to the following participatory activity for reviewing and sharing out producer insights (note my previous discussion of time allocated within Argentine culture).

For the first participatory activity, voice recorders were used, which I explained to producers were just for my own comprehension as a non-native Spanish speaker and would not be shared with anyone else (please refer to Footnote 5 in the previous section for details about our informed consent process). Based on body language and an initial silence in response to my introduction of audio recorders, producers seemed initially skeptical about the use of the recorders but appeared to be put at ease and provided consent when I explained that the

recordings were to help me with language barriers. Producers also seemed nervous to rank markets and existing or potential allies, some saying that it "felt like an exam." We discussed how the information would be presented in aggregate as producer organizations, not as individuals, and that there would be a feedback session with opportunities to discuss and refine responses as a whole, not tied to a particular organization. Again, this helped to ease discomfort, and a few in the circle mentioned that the approach did make it easier to visualize and understand farmer feedback. At some points, Dr. Nugent even said in jest that this was a North American methodology required by my university (making fun of it), which helped to ease producers as well. We also had several note-takers positioned around the circle to both annotate ideas when I was talking, and to help ensure that participants received help with anything they might need (including writing if anyone had limited literacy).

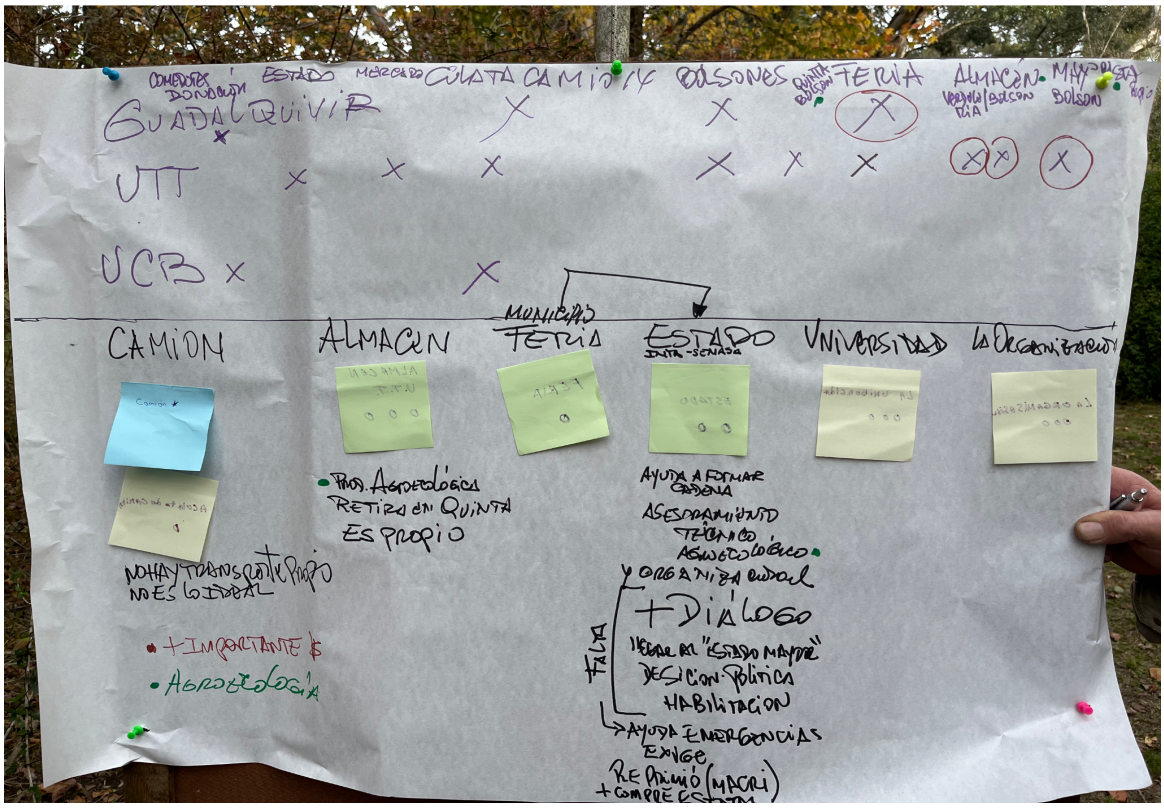

Figure 4: Matrix completed in the first participatory activity of existing commercialization channels and the allies that have helped producers secure access to these opportunities. Red circles indicate the most

important commercialization channels, and green dots represent the commercialization channels only available for agroecological products.

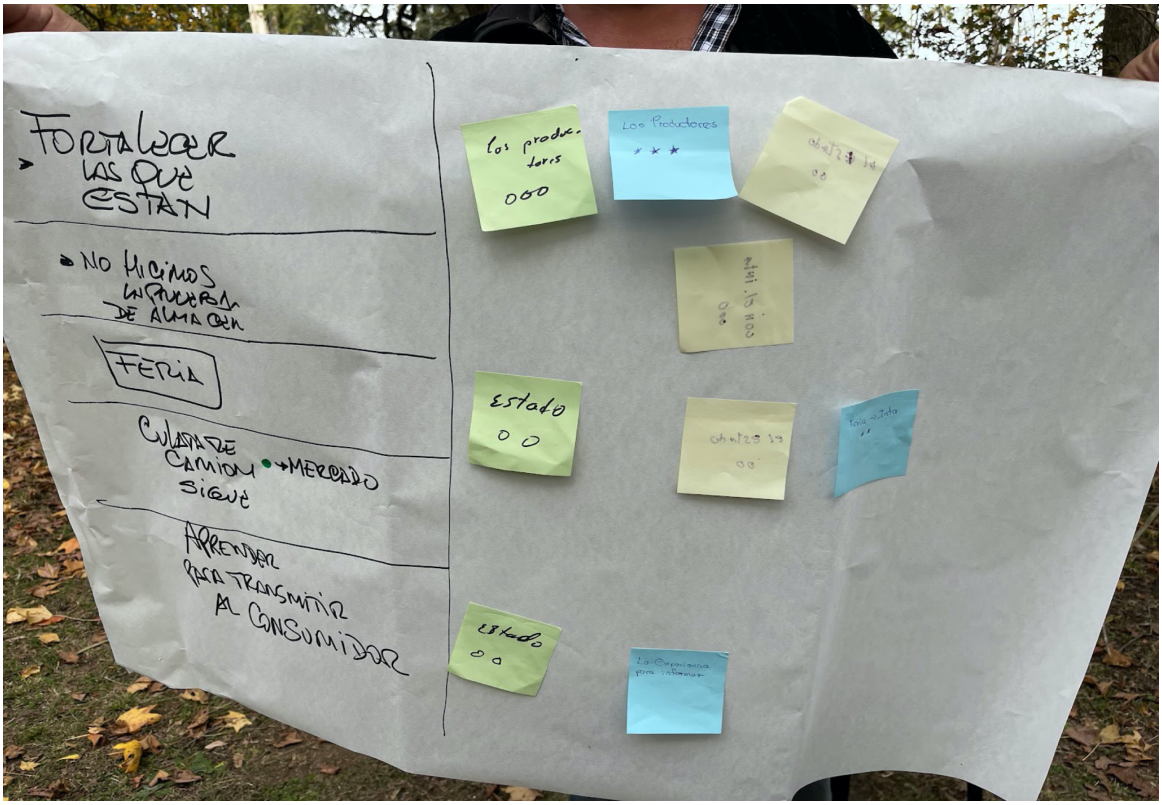

Figure 5: Potential commercialization channels of interest with the alliances that would be most helpful in securing access to these opportunities (identified in the first participatory activity).

Methodology: Second Participatory Feedback Activity

During the second participatory activity, which occurred three weeks later, the results from the first participatory activity were organized with sticky notes by the themes/questions discussed and presented to a broader group of producers (which included MTE, UTT, Asoma and Guadalquivir, slightly different producer group participation than the first session), along with stakeholders representing Jauretche University extension, Jauretche University students, local consumers, the local municipal government, INTA, and a non-profit interested in increasing their involvement with Berazategui farmers. Producers were given time and space to brainstorm with fellow organization members if there were any gaps on the board, and then

breakout groups were instructed to think more critically about the alliances needed to obtain improved marketing opportunities identified in the first participatory activity. Stakeholders were given sticky notes on which they were asked to write a potential alliance that their organization could support (to help facilitate inter-organizational solidarity), as well as other alliances outside of their organization that could be helpful (Figure 6). Generally, there was consensus that the first participatory activity was representative in identifying current and potential markets and barriers to market access.

Figure 6: Final display of concepts from the second participatory activity (note: the blank page is for any key themes that were missed during the first participatory activity).

Data Analysis

Data analysis was ultimately a participatory process. Information from the first participatory session was simultaneously organized into a matrix of notes by Dr. Tito (the notetaker) (Figures 4 and 5). Data were manually coded using a combination of visualizing and organizing responses during participatory activities (which again served as a form of participatory coding to organize and present the data) and using a combination (inductive/deductive) coding scheme to further analyze for nuance based upon research questions

and an emergent theoretical framework (described below). The preliminary findings from the first participatory activity were presented back to producer representatives in the second participatory feedback session to vet and refine qualitative codes (Figure 6).

Data were coded with a combination of Microsoft Word and NVivo (depending on remote access during field work). Data were first coded deductively (predominantly in Microsoft Word) based upon the questions that were asked in the participatory sessions listed below, then coded inductively to evaluate for broader themes:

- What are the existing commercialization channels that producers participate in, if any?
    - Which commercialization channels are the most important?
    - Which allies have been the most important for securing access to commercialization channels?
- What are barriers, if any, to commercialization?
- What are potential commercialization channels, if any, that producers would like to participate in?
    - What alliances would be useful for achieving improved commercialization opportunities?

Emergent Theoretical Framework

As mentioned above, this thesis is rooted in the theory of community capitals, particularly social capital, or the relationships, trust, and reciprocity within a community (Flora et al., 2004; Flora et al., 2018; Bourdieu, 1986). Previous efforts from INTA and Jauretche University found that social capital plays a strong role in supporting peri-urban farmer engagement in local markets and agroecological practices (Nugent et al., 2021). In line with participatory action research, this project not only values participating stakeholders as experts,

but works to investigate what is most useful for stakeholders, as defined by the stakeholders themselves. Thus, it was important that the theoretical framework be iterative to be as contextualized to local realities as possible. Building on my previous theoretical perspective, as the participatory activities unfolded and data were analyzed, the underpinning theory of this research expanded to include educational and extension theories.

Popular Education/Minka Theory

I met with one community thought leader and co-founder of Minka, a local seed-saving bank in Florencio Varela that is part of CEDEPO (*Centro Ecuménico de Educación Popular*, or the Ecumenical Center of Popular Education), which supports family farmers in their transition to agroecology. Popular education is a theory by Brazilian philosopher Paulo Freire, centering marginalized communities, including peasant communities, in the process of developing critical consciousness through action-oriented discourse (Freire, 1996). Minka expands upon this theory of popular education to include these three pillars (Minka co-founder, personal communication, April 09, 2022):

- Complementarity: Acknowledging and celebrating the complementary nature of everyone's differences.
- Reciprocity: Communal give and take, sometimes involving making individual sacrifices for a common good.
- Solidarity: A direct undermining of individualism.

It is important to note here that in this three-pillar system, solidarity is always prioritized over reciprocity. The co-founder explained to me that if anyone is suffering or struggling, solidarity in support of their needs takes precedence over reciprocity. As part of the overarching framework

of popular education, she explained that Minka implements these pillars in such a way that community members will be empowered and free of any dependence on Minka itself.

This Minka popular education framework is useful for the history of farming in Argentina. The co-founder is originally from the northern territories of Argentina, where, as mentioned in the literature review, there is a larger population of Indigenous farmers with a long history of fighting for agricultural and food rights, including land tenure, in the face of growing neoliberal agribusiness, which often was coupled with state-led violence (Leguizamón, 2016; Minka co-founder, personal communication, April 09, 2022). As mentioned above, this struggle links to the broader *Vía Campesina* movement throughout Latin America, including Argentina, which is in pursuit of agroecology as a pathway to food sovereignty, a shared empowerment goal of Minka. According to *Vía Campesina*, food sovereignty is essentially the right of local communities to define their own agricultural and food systems without harming another community through waste or harmful labor practices (Pierrick, 2003).

The Minka framework is also one that pays homage to Indigenous philosophies. For example, Andean communities believe in reciprocity and complementarity not only between people but with the earth and crops as well, where "empathy must exist between the people and the crops they grow," often resulting in the use of agroecological farming practices such as biodiversity (COMPAS, 2007, p. 95). Other Indigenous communities employ a similar idea of *Buen Vivir,* which replaces traditional neoliberal development with community-rooted embrace of diversity, or the pluriverse, which includes both humans and nature as part of the same system of diversity and interdependence. The concept of *Buen Vivir* was even written into Bolivia's constitution in 2009 under Indigenous leader Evo Morales (Gudynas, 2011).

The Minka framework encapsulated the complexity of food sovereignty movements in Argentina, the premise for agroecology, and also honored the diversity of producers who served as co-researchers in this project, many of whom are from Indigenous communities. Therefore, I incorporate this theoretical framework to help evaluate the findings from this project.

Disruptive Paradigms and the Local Theory of Extension

A second co-researcher provided insight into another relevant theory. Dr. Tito presented to me his theory of extension, based on Thomas Kuhn's writings in *The Structure of Scientific Revolutions* (1962). According to Kuhn, science evolves in a cycle of paradigm shifts. There is an existing dominant (or hegemonic) paradigm that most of society accepts as normal, or as the only possibility. An example of the hegemonic paradigm within the scope of this project is the use of agrochemicals, and that farm profitability cannot be achieved through agroecology or sustainable farming practices. At some point, the hegemonic approach does not solve farmer needs, which constitutes an anomaly to the dominant narrative. For example, agrochemicals no longer function to fight off nematodes (which cooperatives such as UCB and 12 de Agosto experienced). Eventually, a new paradigm, such as agroecology, will present itself and provide solutions to these anomalies, and that new paradigm will become the dominant norm. This change cannot happen instantaneously; those who are not yet transitioned to the new paradigm cannot be abruptly pushed to uproot their existing lived reality. For example, organizations like UTT shared their experiences with transitioning to agroecology, but organizations like UCB felt that this transition was not possible for them, and that they were being left behind without any support, not seeing a pathway forward with agroecology. Dr. Tito, like the Minka co-founder, mentioned the need to "accompany" producers in the shift towards a new paradigm, such as providing equitable access to innovations.

According to Dr. Tito, to shift paradigms, there must be some sort of innovation that fits within the existing hegemonic paradigm that can start to build capacity, offer solutions to anomalies, and show the feasibility of a new paradigm. Dr. Tito believes that there are three main axes for innovation: organizational, technological, and commercial, each with four levels of transition from the hegemonic to an alternative paradigm (Table 1).

Table 1: *Dr. Tito's Theory of Paradigm Shifts within the Context of Peri-Urban Farming*

	Axis		
Level	**Organizational**	**Technical**	**Commercial**
1 (Hegemonic Paradigm)	**Producer works individually (solves issues alone, isolated).**	**Conventional farming/use of agrochemicals seen as the only way to produce, nothing else is possible.**	**Very few commercialization channels, mostly long production cycles (many intermediaries between producer and consumer), cannot negotiate prices, must accept the terms of whatever market opportunities come their way.**
2	**The producer is aware of the concept of collectively working with others and starts to feel they pertain to a certain organization. Recognizes issues should be solved collectively, or that producers share common issues, but still working individually or awaiting other entities to solve their problems rather than working collectively.**	**Producer is aware that there is a way to feasibly produce without agrochemicals. Knows what to do to implement a new technical approach (like agroecology) but is not implementing those strategies.**	**More than one commercialization channel, aware that there are more potential channels for commercialization, but hesitant to expand further.**
3	**Producer is working within a well-defined and solidified organization, empathy for the collective and collective objectives have been defined.**	**Producer applies alternative technologies/technical approach but needs to be told what to do and how to do it.**	**More than one commercialization channel, variety of long and short production cycles (fewer intermediaries/steps to reach consumers).**

4 (Alternative Paradigm)	**The organization is strong, it challenges/demands accountability from the state or other actors/sectors. Producers within the organization are empowered.**	**Producers not only engaging with alternative technologies/technical approaches (like agroecology) but knows how to recreate those technologies themselves, can do their own on-farm trials to improve use of new technologies.**	**Producers capable of entering into and generating new commercialization channels by themselves (commercial plasticity). Diversity of production cycles. Can establish their own marketing opportunities.**

To summarize the above table, the hegemonic paradigm for producers (level 1) would be individual, isolated producers using conventional technologies with few channels of commercialization that involve many intermediaries. The alternative paradigm (level 4) would be producers who are part of an organization that can challenge and negotiate with the state/other actors and existing structures, have technological autonomy, and have commercial plasticity.

It is important to note that whereas there was a small sample size for the first participatory activity, the three producer organizations seemed to be quite representative of the spectrum of producer organizations in Berazategui. UTT is fully situated within the alternative paradigm of agroecology, with diversified and autonomous markets, along with a solidified organizational structure. Guadalquivir is practicing some agroecology (but quite reliant on INTA and Jauretche support for technology implementation), has few commercialization channels but is hoping INTA and Jauretche can help them to expand through an additional produce fair, and has a clear organizational identity (although is not organized to the extent of UTT). Finally, UCB is beginning to form an organizational identity, but rooted firmly in conventional technological practices and reliant on truck driver intermediaries for market access. This representativeness was confirmed in the second participatory activity, which included two additional producer organizations who generally agreed with the themes from the first activity. Below (Table 2) is a visualization of the three initial organizations within Dr. Tito's theoretical paradigm framework.

Table 2: *Classification of Each Producer Participant from the First Participatory Activity within Dr. Tito's Paradigm Framework*

	Axis		
Level	**Organizational**	**Technical**	**Commercial**
1 (Hegemonic)		UCB	UCB
2	UCB	Guadalquivir	Guadalquivir
3	Guadalquivir		
4 (Alternative)	UTT	UTT	UTT

According to Dr. Tito, innovations must be diffused in such a way to "fit within the daily matrix of producers. These innovations cannot overly modify or fully dismantle the existing practices of producers, must generate rapid benefits, be simple to implement, and leave the producer with a critical attitude towards how they carry out their daily work" (Gustavo Tito, personal communication, May 2022). For example, the tomato trial that INTA implemented is a technological innovation that was easy for farmers to implement and gave them bountiful tomato production that could be used for either fresh market or for processing, which made the requirement to grow the tomatoes without agrochemicals more feasible. Now, conventional farming organizations like 12 de Agosto are looking into ways of expanding tomato production and are willing to implement an agroecological trial to address nematodes (which is another anomaly of their conventional farming practices, as their existing agrochemicals have not been able to eliminate this issue).

Dr. Tito then discussed why it is so important to focus on innovations through the axis of commercialization, because the reality is that farmers are existing within a capitalistic society, and often profitability needs to be prioritized. For this reason, he overviewed the power of

diffusing innovations to consumers as well, so they can start to learn about concepts such as agroecology and start to shift the hegemonic norm away from conventional farming. If new channels of commercialization are added, this can serve as an entry point for shifting other hegemonic practices. An example of this is the Jauretche University produce fair, which only allows producers to participate if they are either fully growing in agroecological ways or transitioning to agroecological practices. According to Dr. Tito, certain conditions can be added to innovations to speed up paradigm shifts. Dr. Tito's framework adds additional rationale and context as to why understanding potential avenues for improved market opportunities is essential for a shift to the paradigm of agroecology; an existing hypothesis that many farmers have is that conventional farming is the only profitable option, but conditions can be given to market opportunities that can create an anomaly to this hypothesis and catalyze a shift to agroecology.

Limitations

It is important to note that my field observations were entirely through the lens of observing the day-to-day activities of Dr. Nugent and Dr. Tito, and much of the information in this thesis has been either vetted through or taught to me by them. Their expertise was invaluable both as public servants to the community of producers and as veteran extension practitioners, and I was able to gain follow-up context for every interaction during my time in the field. However, it is important to consider that the approaches and conclusions from this research are derived from the opinions and expertise of Dr. Nugent and Dr. Tito, two white, male, middle-class, highly-educated extension practitioners serving a predominantly non-white, economically disenfranchised community of farmers. In many ways, their positionalities are similar to mine and create a power imbalance that cannot be overlooked in this research.

Findings

Here I present the findings generated by the producer associations during the participatory activities and interpreted through the theories of capital, popular education, and shifting extension paradigms to address each research question in turn. These findings emerged from a combination of deductive coding based on research questions and inductive coding to identify broader themes and inform the discussion section of this research.

Existing Commercialization Channels

The most marginalized farmers (in this case UCB and some members of Guadalquivir) only have access to one commercialization channel, which is farmgate truck driver sales. Because these farmers do not have access to the transportation, time, or awareness needed to engage in more direct marketing opportunities, they are essentially at the whim of the schedule and prices of truck drivers who come by their farm, buy their products in bulk, and take them to markets, where consumers pay much higher prices (the majority of which is pocketed by the truck drivers or other intermediaries). For example, UCB sells truck drivers 12 units of chard for 100 Argentine pesos (equivalent to USD $0.63), but chard is very popular with consumers at farmer's markets and can sell at 100 pesos for just two units (UCB producer, personal communication, May 2022).

Other commercialization channels exist through the municipal government, through a program called *Mercado Vecino*, where the municipal government will invite merchants to sell their goods with price caps every 15 days through a mobile market for consumers who live further away from centralized markets. Farmers involved in this market channel (such as 12 de Agosto) are typically assigned a day and time to sell their goods. The municipal government also

supports with *bolsones* opportunities (or distributions of bagged produce) and produce fairs. Produce fairs represented another avenue of commercialization for some farmers.

Producer groups who were the most organized (almost exclusively referring to UTT) had commercialization channels that were created and operated by the producer organization itself. These included *bolsones* distributions, produce fairs, wholesale agreements, and in-house brick-and-mortar produce stores (*verdulerías*). UTT has a network of over 400 organization-affiliated points of sale throughout the country (UTT, n.d.).

Some producers also engaged in direct sales, with consumers either picking up produce directly from their farm or placing orders in advance to pick up from other commercialization events (like produce fairs). Finally, during the pandemic, some producers send food to local dining halls to support their fellow community members.

Most Important Existing Commercialization Channels

There was some discussion about what "most important" meant for producers in terms of commercialization channels. Generally speaking, importance was given to commercialization channels that resulted in the greatest net profit for farmers. Net profit considered transportation costs, costs of entry, and time commitments for the producer (more on this in the barriers section below). However, for some organizations, like UTT, who work to educate consumers about concepts like agroecology, some commercialization channels with lower net profit could be seen as important for generating relationships with consumers (thus highlighting the importance of social capital in this market network).

For producer organizations situated within the hegemonic paradigm, the only option was sales to truck driver intermediaries, making them the most important commercialization channel by default, not by merit. For UTT farmers (engaged in the alternative paradigm), the most

important commercialization channels were the wholesalers, brick and mortar *verdulería* stores, and bagged *bolsones* efforts organized through their own cooperative. UTT farmers decide on fixed prices to encourage stability and support more equitable prices for both producers and consumers, so the revenue for the above commercialization channels were relatively indistinguishable. Most UTT farmers preferred these channels over produce fairs, because it required less of their time and effort. The organization employs personnel to support with post-harvest coordination to markets for the preferred commercialization channels, thus allowing producers to only worry about producing on the farm.

The third participating organization, Guadalquivir, found fairs to be most important, as they helped to generate relationships with consumers and the direct sales eliminated any intermediaries who would pocket revenue. It is important to note that Guadalquivir does not have any organizational roles to support with post-harvest market coordination or logistics.

Most Important Allies for Existing Commercialization Channels

For those who sold exclusively through truck drivers, producers were hesitant to call these truck drivers "allies" (one producer joked that she would like to give a negative ranking to truck driver intermediaries). UTT identified their own organization as the most important commercialization ally, with INTA as a close second in supporting with opportunities for dialogue and technical assistance. Guadalquivir identified fellow organization members and local universities as the most supportive in facilitating opportunities for market integration. It seemed that important allies were those who could support with producer timesaving and market access without pocketing too much of produce sale prices.

Barriers to Commercialization

Producers discussed several barriers to commercialization, which included:

COVID

After the onset of the pandemic, producers who were dependent on intermediary truck drivers for market access suffered, as drivers came to their farms with less frequency. However, for farmers who had diverse commercialization channels, the pandemic offered some opportunities, as consumers became more interested in obtaining local produce, and the *bolsones* program was created as a way of meeting that demand and supporting community health during isolation, which also created a new market for producers who were organized enough to meet that demand.

Producer Time Constraints

Whereas many producers are interested in expanding commercialization channels, there are many who cannot afford to lose a day of field work, particularly producers who do not have employees to take over farming operations. For example, going to a produce fair is often an all-day event, especially for those who do not have access to their own forms of transportation.

Organizing and Trust-Building

Participants, including those from UTT, acknowledged that organizing is a long, time-consuming process. It is difficult to organize across the commercialization chain, and many producers faced the reality of working with intermediaries who do not have their best interests at heart.

Basic Needs

Many producers were interested in expanding their commercialization or engaging in practices like agroecology that could improve their access to differentiated markets or appeal to consumers, but felt that these innovations could not be possible without first addressing basic needs. These needs include the following:

- **Infrastructure:** many farmers shared that they have poor-quality dirt roads that flood when it rains and make it impossible to transport their goods to market. Farmers also need support with constructing barns and other necessary structures.
- **Financing and inputs:** In a country that offers significant subsidies to large-scale agribusiness operations, there is very little focus on providing financing and inputs for small-scale horticultural producers. Farmers cannot invest in diversifying production or implementing agroecology if basic inputs, like seeds, are not accessible.
- **Water quality:** As mentioned above, UCB does not have access to quality water, a key element of reaching a profitable yield to diversify market opportunities.
- **Land tenure:** Farmers are often on two-to-three-year leases and forced to move due to predatory landlord behaviors, such as dramatic rent increases. Farmers without land tenure are not incentivized to invest in their soil or practices like agroecology that can support improved yields and market opportunities, because they may be forced to move before they can reap the benefits of any investments. This also limits their ability to plant permanent or perennial crops.
- **Disaster relief:** With climate change, farmers are experiencing heightened incidents of extreme weather, which destroy farmers' crops and ability to expand commercialization efforts. There is not only a need to set up additional funds for disaster relief, but a need for reduced paperwork and bureaucracy to ensure that funds can reach farmers in a timely manner.

Potential Commercialization Improvements

The following were ideas that producers generated for improving market access:

- **Support with the basic needs mentioned above:** Producers felt they could not innovate without first addressing basic needs.
- **Strengthen existing marketing channels:** Again, producers felt that basic market activities needed to be supported before any innovations could take place.
- **Reduced intermediaries:** Producers felt as though there needed to be increased access to more direct markets, as opposed to selling through an intermediary who pockets most of the revenue. This includes:
    - **Establishing direct relationships between producers and industry representatives:** Along the lines of the INTA tomato trial, producers want to sell directly to industry representatives.
    - **Setting up additional direct-marketing opportunities:** Producers wanted to test out communal brick and mortar produce stores, a local fair in El Pato and Parque Pereyra, and direct sales to consumers, restaurants, and grocers.
- Along the lines of reduced intermediaries, producers wanted to establish commercialization chains of affiliated allies with the producers' best interests at heart (**a value chain of allies rather than intermediaries)**, mimicking the structure of UTT.
- **Fixed prices** to reduce market volatility for producers, industry buyers, and consumers.
- **Differentiated market opportunities**: Farmers (mostly UTT) wanted to educate consumers and increase the number of agroecological-only markets where they could differentiate goods from conventional markets and sell at higher prices. Other farmers wanted to educate truck drivers on the diverse array of cultivated produce to encourage them to buy a greater variety at higher prices.

Allies for Expanding Commercialization Opportunities

At the second participatory activity (where feedback was elicited for the findings of the first participatory activity), participants agreed through deliberation in pairs followed by a group discussion that these actors were important allies:

- **Fellow producers:** There was a consensus that not only did there need to be more organizational support and roles added through producer organizations, but producers also wanted more opportunities to exchange ideas with local and regional groups of producers to learn about best practices and help to better incorporate isolated producers (perhaps even creating new cooperatives to include any unaffiliated or isolated producers).
- **Consumers:** producers felt that consumers, if educated about where their money goes, could become allies and advocate for more just prices for producers and more direct marketing opportunities for producers.
- **INTA/Local Universities:** Producers identified that INTA and local universities could be helpful for technical support (especially with agroecology) and help to inform producers about marketing opportunities (some producers do not have capacity to look for opportunities on their own).
- **Designated promoters:** Promoters could be university students, community members, or consumers who could support by promoting the needs of local producers through platforms like social media.
- **Truck drivers:** Although there was significant animosity towards truck drivers, there was the idea that these truck drivers could be educated and trained as better allies. For

example, they could learn more about the produce varieties to share with consumers or grocers to negotiate higher prices.

- **The municipal/state government:** Governments could support basic needs/infrastructure and connect producers with market opportunities or direct relationships with industry representatives.

Discussion

In addition to the more deductive coding process that generated the above findings, inductive coding revealed more complex dynamics for discussion, which I present here complemented by a theoretical and academic lens.

Sustaining Pandemic-Related Commercialization Support

Through both the observational period and the participatory activities, one theme that emerged was the need to critically think about which pandemic-specific resources should continue as communities emerge from COVID quarantine, and how to support these efforts to evolve from ad-hoc emergency resources to sustainable resources. For example, many producers started up *bolsones* programs with the support of the municipal government. This was in part due to consumer interest in cooking from home during quarantine. During the *Mesa Agraria*, producers mentioned that there needs to be a greater effort to generate consumer awareness about the *bolsones* program, but that it is time consuming to make phone calls and spread the word. A designated role to make calls or promote the *bolsones* on social media could be one form of allyship that is developed to sustain the *bolsones* post-pandemic. Many other farmers during the first participatory activity mentioned that the additional commercialization channels during the pandemic were helpful for their income, and some commercialization channels (like the *bolsones*) were less time consuming than attending a local fair. There needs to be a critical

discussion on how to maintain momentum of pandemic-related commercialization channels once consumers return to normal activities (which may lead to a decrease in time available for cooking vegetables at home, for example).

This discussion around post-pandemic commercialization support relates to Flora and colleagues' community capitals framework (Flora et al., 2018). The pandemic forced new networks of relationships between consumers and producers which helped to sustain local economies, support the health of the community, and save producer time. This social capital of reciprocity and trust between consumers and producers fed into other types of capital, such as economic capital (via producer income). As Flora and colleagues describe, different types of capital, such as social capital are necessary for a thriving community. In this scenario, the community recognizes the need for a role exclusively dedicated to fostering social capital, in the form of a community member who can publicize producer goods and build consumer-producer networks.

Equitable Opportunity and Representation

UTT not only ranks highly in terms of Dr. Tito's paradigm shift theory, but also emerged as the ideal framework for organization in the participatory discussions. They successfully practice agroecology, granting them access to differentiated markets, they educate consumers as to why their products are worth higher prices, they agree upon fixed prices to reduce market volatility, and they have organization posts along the entire production and commercialization chain. However, it is important to note that UTT itself recognizes that both agroecology and organization does not occur overnight and requires much sacrifice. One UTT producer who runs an agroecological plant nursery for the organization even recognized that there were years where instead of purchasing a new vehicle, he needed to invest his money into transitioning to

agroecology, or to maintaining the plant nursery. In the long run, the transition was worthwhile for him, but it required sacrifices that producers like those in UCB may not be able to make or imagine making given their existing paradigm. When new opportunities present themselves, such as electing a local producer to serve on the board for the *Polo Agrario* or selecting a producer who can partner with a tomato processor, UTT is best poised to advance into these new opportunities.

Advancing organizations like UTT into new opportunities for partnership with industry representatives or the *Polo Agrario* would serve to exacerbate disparities between organizations embracing alternative paradigms and those who are still operating within the hegemonic norms. Although organizations like UCB could be led to further question the hegemonic norm if they were excluded from qualifying for industry relationships or leadership opportunities given their farming practices, it may be demotivating if they were to even transition to shifting paradigms, as this takes time. Farmers must be encouraged along this process of transition rather than continuously excluded from marketing innovations or opportunities. This exclusion can serve to create inter-organizational animosity; the UCB representative, upon hearing that UTT was in conversation with a tomato processor industry representative, joked that UTT should "leave something for others!" This shows that UCB is situated along the hegemonic norm of Dr. Tito's theory, as they are focused more on the individual rather than the collective. However, according to Dr. Tito's theory, any one axis can be used to leverage change along another axis. For example, UCB could be supported with a new commercialization channel in exchange for testing out an agroecological practice, which may encourage farmers to unify together more or reach out to UTT as supportive allies.

Agroecology as a Solution

Through the participatory sessions and observational periods, additional ideas emerged (particularly from UTT representatives) as to why it is important to shift to agroecology. These motivations for transitioning to agroecology could be leveraged by extension personnel or used to facilitate further discussions around implementing an agroecological transition. UTT members shared that conventional farming is more volatile to market changes because it is reliant on inputs that must be purchased using USD (such as agrochemicals). Agroecology frees farmers from reliance on expensive inputs, which can help with cost-saving. Dr. Nugent responded that switching to agroecology is not just a farming practice, but grants access to a distinct social economy. Indeed, UTT members also mentioned that they could enjoy differentiated marketing channels by selling to consumers in markets guaranteed to be free of agrotoxins. UTT explained that agroecology is about growing and providing food that fits the needs of both producers and consumers. This sentiment ties into the Minka theoretical framework which connects with *Vía Campesina* food sovereignty movement and its tenants of reciprocity and complementarity, situating consumers and producers as part of the same community in a healthy ecosystem (*"Agroecology, a Way of Life*,*"* 2017). Many Indigenous philosophies, such as *Buen Vivir,* also concur with this concept of reciprocity and solidarity across an entire community, caring for the environment and humans alike (Gudynas, 2011; Fatheuer, 2011). Through this world lens, consumers and producers are necessary allies, which organizations like UTT have fully embraced as an alternative hegemonic producer norm.

This world vision of solidarity across producers, consumers and the environment was one that emerged several times during my stay in Argentina. During the INTA tomato workshop with industry representatives, an industry representative remarked that some conventionally grown

tomatoes look beautiful on the outside but are nearly white on the inside without any flavor. A UTT representative interjected with "because that's not a tomato! That's a sham." The UTT representative explained that agroecology is about being transparent and growing actual food, not deceiving consumers with products filled with toxic chemicals and devoid of nourishment. According to UTT representatives, it is important to educate producers and consumers alike about the dangers of agrochemicals; *"Para convivir con el veneno no se puede. Como no se convive la muerta y la vida* (One cannot coexist with poison [agrotoxins]. Just like life and death cannot coexist)." This transparency of growing without agrochemicals for the health of everyone can help to build trust to advocate for more just prices for producers.

Indeed, the fact that agroecology positioned farmers to implement culturally specific practices tied to their Indigenous ancestors (in line with theories like *Buen* Vivir), seemed to be a draw to agroecology that extended beyond UTT representatives. As most farmers are of Indigenous Bolivian or Paraguayan roots, this was the only point surrounding agroecology during the participatory session that did not seem to receive any contention; agroecology honored Indigenous farming practices. One farmer who transitioned to agroecology described how he could recall farming strategies that his mother and grandmother shared with him that he always thought were myths, but then learned that his ancestors were practicing agroecology to take care of plant and soil health. As he stated, *"cultura muy buena de antes nos sostiene la tierra* (very good culture from the past sustains the earth)." Perhaps framing agroecology as a culturally specific tie to the Indigenous cultures of many peri-urban migrant farmers could serve to incentivize further transitions to this paradigm.

From Intermediaries to Allyship: Shifting the Narrative Towards Collectivism and Solidarity

Originally, the research questions centered around social influence; for example, "who has the most influence in helping you attain access to local markets." However, Dr. Nugent and Dr. Tito suggested we instead focus on allyship for change, rather than identifying those with influence or power to enact change. Dr. Nugent and Dr. Tito recognized that many farmers would likely point to the municipal government as the only entity who could make a difference or solve issues with commercialization. Indeed, in a country like Argentina with such a long history of neoliberalism where the government has historically prioritized large-scale industrialized agriculture for export over the local needs of its citizens, those who have been structurally marginalized (like small-scale producers) might feel helpless or look to the government to enact change to better serve local needs. However, this could serve to reinforce animosity between the municipal government and producers. This focus on allyship also relates to the importance of social capital (strengthened networks of interpersonal relationships).

Representatives from UTT also shared that it is essential to not wait for structural changes, but rather for producers to organize enough to be able to demand change. As one producer mentioned in relation to working with the state, "*nosotros hacemos que nosotros vamos a sugerir, no vamos a esperar. Esperando no nos llega*." This roughly translates to, "we will implement our recommendations for changes, we won't wait around. Nothing comes to us if we're waiting." UTT mentioned that it is important to combine action with educating the state, consumers, and other stakeholders to become allies for what producers need (such as supporting with increased prices or improved market opportunities). Indeed, Dr. Nugent and Dr. Tito commented throughout my time in Argentina that it is important to show institutional

stakeholders, like the municipal government, that producers are interested, willing, and able to engage in new market opportunities, thus incentivizing further support (such as moving forward more quickly with the *Polo Agrario* plans). It is essential that the municipal government view producers as capable allies who can successfully innovate and be trusted to identify feasible areas for growth.

An overarching theme from my observational experience and discussions from the two participatory activities was the contrast between market intermediaries versus market allies. Those who relied on market intermediaries, like UCB or Guadalquivir, viewed these intermediaries as detracting from the common good. Those who replaced intermediaries with other trusted allies from the community or from the same organization, such as the UTT's wholesalers or coordinators for *bolsones*, viewed these allies not as subtracting from the common good but rather as supporting their best interests, despite the fact that these jobs do require some payment to cover wages. One UTT member described this mentality; *"si está bien organizado, vos generás cosas. Si está mal organizado es restar, restaco. Si es restaco. . . es donde el consumidor paga mas y el productor gana menos* (If it's well organized, you generate things. If it's badly organized, it's subtraction. If it's subtractive… This is where the consumer pays more, and the producer earns less)." Adding allies to the commercialization value chain is seen as supporting producers in saving the time with post-harvest marketing while generating just labor opportunities for community members to occupy post-harvest roles, rather than intermediaries who upcharge by an unfair degree for both producers and consumers. Clearly, social capital is a necessary component of agroecological market inclusion for producers in Berazategui. Social capital is necessary in generating allyship throughout the entire production and

commercialization chain, from designated partners to locate potential market opportunities, allied truck drivers, fair coordinators, and community promoters to educate consumers.

Through my observations and the participatory activities, I recommend that a fourth axis be added as a priority in Dr. Tito's guiding paradigm shift framework, which is external solidarity. This axis would link together Gustavo's theory with the pillars of Minka, which is guided by Indigenous philosophies and the Indigenous-led fight for food sovereignty in northern Argentina (Leguizamón, 2016). As the leader of Minka shared with me, solidarity must be prioritized over reciprocity, it is about showing up for those who are struggling (Minka director, personal communication, April 8, 2022). This axis of solidarity can serve to not only evaluate an organization as a single unit, but a producer and organization's ability to work with and support other producers or organizations. Without a mindset towards solidarity, producers like those in UCB will continue to lose marketing opportunities and start to view organizations like UTT as detracting from the common pool of resources. This axis can also inform the approach of extension, working to create dialogues around solidarity, which they are already beginning as demonstrated through the questions around allyship in the participatory activities. Extension must work to hold organizations like UTT more accountable to being in solidarity with less organized groups like UCB, despite their ability to implement agroecology, and organizations like UCB who are less organized must be educated about how the work of more organized groups like UTT serves to benefit the collective good (such as fighting for land tenure rights and fairer prices). One way that this could look would be to provide discounted soil tests to a more expansive list of UTT producers with the requirement that these producers extend nursery services to a non-member organization or help another member organization develop a fixed pricing scheme.

Conclusion

This research used a combination of observational analysis and participatory activities to evaluate which alliances could promote improved agroecological marketing integration for smallholder family farmers in Berazategui, Argentina. Findings suggested that social capital is indeed an integral part of improved engagement with agroecology and access to local marketing opportunities, but only tells part of the story. The most important commercialization channels were truck driver intermediaries (for those who had no other option), produce fairs (as ways of generating direct relationships with consumers), and *bolsones*, grocer distributors or brick-and-mortar vegetable stores (for organizations who had roles assigned to the entire commercialization value chain). Barriers towards commercialization included COVID (for those without commercial plasticity), the time-scarcity of producers to find and sell at markets, exploitative intermediaries (for those who did not have organized producer roles along the commercial value chain), and a lack of access to basic needs (such as needed infrastructure, financing, inputs, disaster relief funds, and land tenure). Allyship with the municipal government, INTA, local universities, students, other producers, and local non-profits could assist with overcoming these barriers. Farmers were interested in expanding marketing opportunities in the following ways: strengthening existing marketing channels, supporting access to basic needs, reducing intermediaries, setting up fixed prices, and differentiating markets for farmers who practiced agroecology.

Sharing Findings: Community Accountability

To counter traditional extractive power dynamics of US researchers traveling to other countries to take information to inform research, I am now in the process of working with Dr. Nugent and Dr. Tito to refine a research summary sheet that can be useful to producers for

advocating for their own needs within projects such as Berazategui 2050. Dr. Nugent and Dr. Tito are not only experts in producer needs, but also were recognized by producer representatives as being one of their most important allies, and I defer to their judgment for how to most effectively present back the summary sheet and ensure that it helps to inform marketing strategies within Berazategui 2050.

Degree of Participation

As mentioned in the methods section, this project utilized a participatory approach to examine producer realities. However, it is important to qualify the degree of participation of this project. As mentioned in the literature review (Chambers, 1994, 1995; Rodgers, 1994), the term "participatory" can be easily co-opted; projects labeled as participatory can vary drastically in terms of their level of actual community co-creation and accountability. Below (Figure 7) is a graphic that shows the participation continuum. Towards the leftmost extreme of the continuum, the least amount of participation signifies a stark divide between researchers and the community, where the researcher controls every aspect of the research with little to no community ownership or collaboration aside from the researcher soliciting responses from community members. The opposite end of the spectrum signifies increased community participation, with community members leading and controlling the research itself, and less distinction between the researcher and the community. I categorize this research project as situated left of center on the below participation continuum, as the research questions and methods were not designed by community members, but rather by myself, Dr. Nugent and Dr. Tito. Research questions were refined based on pilot testing with producers during the observational phase, and there was participation by community members in the two participatory activities, but producers did not have ultimate ownership over the project, reducing its accountability to the community.

Figure 7: The participation continuum, a simplified view of the varied degrees of community ownership and co-creation of participatory projects (Burns et al., 2011).

The above participatory continuum diagram simplifies the varying degrees of participation that can be found in each stage of the research process. To help visualize where this project is situated along the participation continuum, I used a bullseye activity developed by Ballard and colleagues (Figure 8) to help researchers understand the level of participation across each stage of a project, referencing the continuum in Figure 7 to rank the degree of participation of this project.

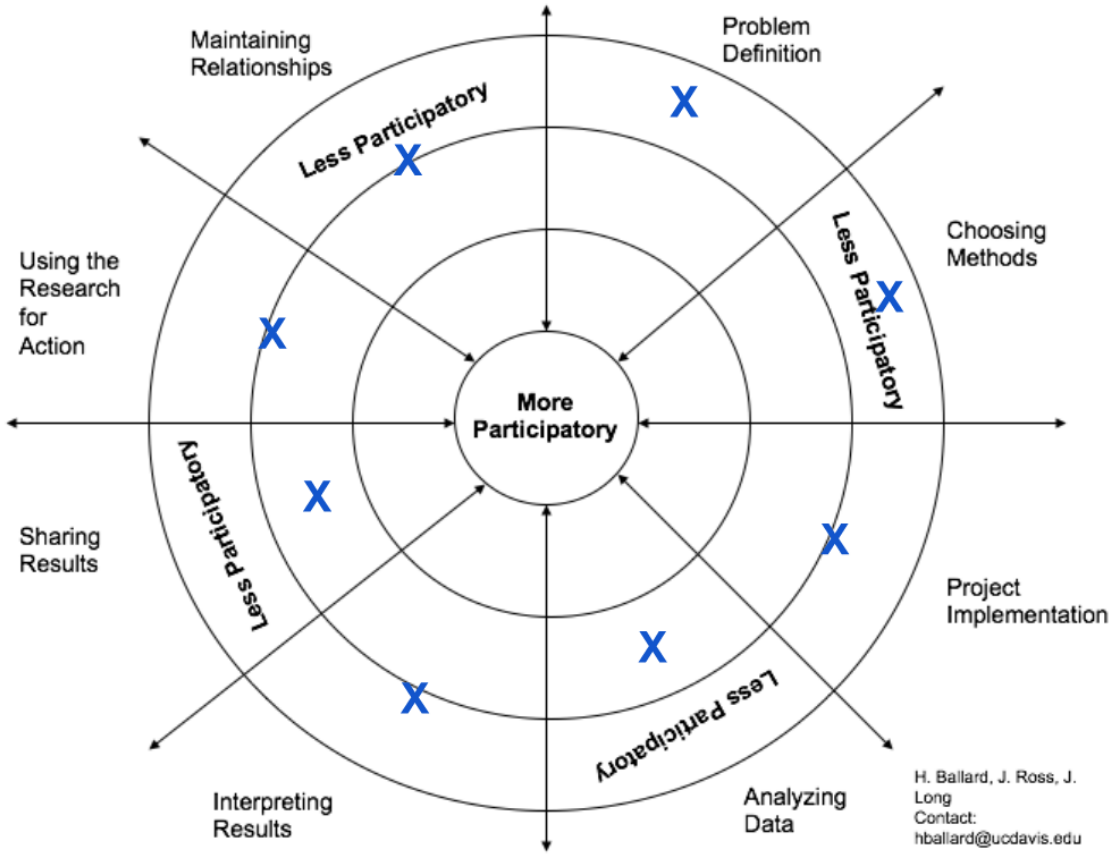

Figure 8: Bullseye activity to help situate each stage of a research project within the participatory continuum (blue X's are where I subjectively rank this research project) (Ballard et al., n.d., as cited in Ballard, 2022).

Here is a summary of the degree and limitations of this project's participatory qualifications:

- **Problem definition:** The problem identified in this project was informed by prior research with producers, but defined primarily by the two extension personnel with my input, therefore it was not a participatory process.
- **Choosing methods:** Methods were not chosen by the community, but rather exclusively by myself with guidance from the two extension co-researchers.
- **Project implementation:** The activities implemented in this project were administered by myself and the two extension agents. Generally speaking, producers were asked to respond to questions that myself and the two extension agents devised. Although there

were opportunities for discussion and input from producers, I rank this phase as less participatory.

- **Analyzing data:** Data analysis was largely conducted during the first participatory session (the findings were organized visually as part of the activity). However, overarching themes from contextualizing and presenting the activity data were identified by myself with guidance from extension personnel, not from community members, ranking this step as intermediately participatory.
- **Interpreting results:** Results were largely interpreted by myself and then presented back to the community, rather than the community itself organizing and drawing insights from the data. The results were largely already organized during the first participatory activity, which did involve some degree of community ownership and collaboration, but there is certainly room for improvement (provided that data analysis would be of interest and convenience for producers).
- **Sharing results:** Result sharing was intermediately participatory in that it was conducted with producers and other stakeholders with opportunities for feedback. However, few producers were involved in the feedback session, limiting its participatory nature.
- **Using the research for action:** This research is intermediately participatory in its use for action, as it will help to hold extension and municipal personnel accountable for serving the commercialization needs and priorities identified by producers. However, this is not fully participatory, as producers are largely beholden to municipal or extension decisions on how to foster improved market access.
- **Maintaining relationships:** This I ranked on the cusp of less to intermediately participatory, as I myself was only in the study area for two months, without the ability to

develop long-term relationships and build trust with community members. Dr. Tito and Dr. Nugent, however, will continue to build trust and relationships with producer stakeholders, and will carry this project forward in their existing efforts in the area, as they are committed to serving producer needs.

It is important to note that the above ranking for participatory research is centered around the researcher ideal that community members have ownership over each aspect of the research project. However, this ideal may not be feasible for the participation of those who are most marginalized. This also extends to our ideal of scheduling meetings around existing extension events with producer representatives. Whereas we adhered to this meeting approach with the intention of minimizing producer demands in the context of existing extension surveying and collaboration with producers, it ultimately served as a means of efficiency for myself and the two collaborating extension personnel within our limited fieldwork timeframe. Whereas convening with producer representatives may have been in support of collectivism and solidarity, we could not confirm if the most marginalized producer needs were addressed, as we did not conduct extensive grassroots interviewing or field visits with those who could not be present during the participatory activities or other meetings with extension (perhaps because of limited resources such as free time and transportation). Therefore, this streamlined meeting approach could have undermined the level of community participation within this project.

Lessons Learned

Whereas this project did suggest helpful recommendations for market expansion, I would have liked to place more emphasis on inter-organizational allyship. Despite explicitly asking participants in the second participatory activity about ways that they could ally with other organizations to expand market access for all, the conversation often reverted back to identifying

which organizations held power rather than how organizations could work together. This could simply be the realities of the study area, where marginalized farmers feel powerless compared to actors such as the municipal government, but I do think as facilitators, myself, Dr. Tito and Dr. Nugent could have pressed more on what an imagined future of allyship could look like. However, this issue could simply be reflective of Minka's theory of reciprocity versus solidarity; reciprocity cannot occur before basic needs of the most marginalized are met (Minka Co-Founder, personal communication, April 09, 2022).

Along the lines of solidarity, I feel that intersectional identity, such as Indigenous or migrant identity, could have been more explicitly interwoven into the participatory activities or into my own questions during the observational portion of the field work. Most, if not all, of the producers, were descendants of Indigenous communities in Bolivia or Paraguay, and this research is inherently limited in that it does not intentionally evaluate the lived experience of co-researchers along lines of identity (such as migrant identity or Indigenous identity). This focus on identities such as Indigeneity could have unveiled richer data. For example, some producers during my stay in Argentina mentioned that their Indigenous roots were a strong motivator for practicing agroecology; perhaps this would ring true for other producers as well and help to guide conversation about how to form solidarity networks around common identity and shared values. Additionally, Indigenous producers and Indigenous epistemologies were not consulted in the initial crafting of research questions and methodologies, which could have helped to unveil additional "hidden transcripts" that were not shared with us in this research (Chavez et al., 2008).

It is important to note that migrant and Indigenous identities are not homogenous categories. It would be useful for future research to examine how producers might engage with or respond differently to this research based on variables such as specific ethnic ties or whether

or not they were first or second-generation migrants. We also did not examine whether or not migrant farmer legal status factored into their ability or willingness to work with extension or other government initiatives, such as Berazategui 2050. Migrant status could impact the longevity of land tenure or fears around seeking support (for example, if a migrant farmer is undocumented).

Questions around allyship were asked towards the end of both participatory activities, and by this point, participants' body language indicated that they were ready for the meeting to conclude, particularly during the first participatory activity. Whereas it was useful to combine participatory data collection activities with existing meetings to support farmers with limited access to transportation, I would recommend combining with other meetings with less ambitious agendas. The first participatory activity took place after farmers met with INTA and industry representatives to discuss the INTA tomato trials and producer/industry collaborations. As was most common in this cultural setting, this meeting went over time, and many farmers needed to return to their farms in the afternoon when we ran our data collection activity. I noticed that farmers were quite fatigued by the second half of the day. However, another important lesson was to provide a meaningful lunch for participants; in this case a classic *asado*, or barbecue, was provided (which is not insignificant given rising meat prices in Argentina). This showed some small act of gratitude and reciprocity to farmer participants.

Another lesson is to streamline innovations and demands of producers in the planning process for service provision. For example, the municipal subcontractor conducted their activity in a separate location the same day as the previously scheduled INTA/Jauretche meeting with producers (which included the first participatory activity of this research). The INTA/Jauretche meeting was also structured to address the same topics of commercialization support for

producers, and the day would have been much more effective for everyone had efforts been combined.

Whereas the participatory activities were designed to be inclusive of varying literacy levels (farmers were paired together to write on sticky notes with many facilitators scattered throughout the room to assist, and each sticky note was read aloud to the group by facilitators), I would not recommend having farmers rank allies by drawing stars. Many farmers did not know how to draw a star, and we eventually said that they could just draw small circles or dashes, which proved to be much more effective. Alternatively, we could have given out stickers that farmers could use on the sticky notes for ranking.

Finally, the second participatory activity was extremely successful in having non-producer stakeholders in the room commit to allyship. For example, Dr. Tito discussed setting up a fair in El Pato, and a local student committed to supporting with social media and other public awareness-generating opportunities for farmers. However, there were few non-producer members in the group, particularly municipal government representatives; future studies should ensure that there is a robust array of stakeholders present for feedback and data sharing sessions to increase communal accountability.

Remaining Questions and Recommendations for Future Studies

Through inductive coding, several questions emerged from the participatory activities that must be addressed by the full spectrum of identified allies as projects like Berazategui 2050 move forward. These questions can help to inform future research in the study area:

- **How can allies support producers who practice agroecology to enjoy differentiated market opportunities without further marginalizing or excluding farmers who are trapped in the hegemonic paradigm of conventional agriculture?** As organizations

like INTA and the municipal government establish marketing opportunities for those who exclusively use agroecology, how can this be done in such a way that those who practice conventional farming or who are in the transition to agroecology do not suffer economically to the extent that it is no longer feasible to continue farming for long enough to potentially one day transition to agroecology?

- **How can it be decided which producers or producer organizations are given direct marketing relationships with stakeholders like industrial food processors or merchants?** Programs like the *Mesa Agraria* are looking to foster these direct marketing opportunities, but processes must be put into place to ensure equitable opportunities for producers to expand their social capital in this way.
- **How can alliances be created to support producers along the entire commercial value chain without taking up too much of producers' valuable time?** Organizing to replace intermediary roles with allies, or educating intermediaries to become allies, is a time-consuming process (as seen through UTT's work). For time-resource limited farmers, this may not be feasible without external support.
- **How can the commercialization channels and support that emerged during the pandemic be sustained post-pandemic?** Many consumers were interested in buying local vegetables to cook during quarantine, but how can the marketing opportunities that emerged from that interest be sustained post-pandemic?

In this research, I reviewed a modified theory of paradigm shifts that informs the local extension goals in the study area, informed by organizational, technical, and commercial axes. Each axis can be used to leverage change along another axis. According to this framework, the ideal producer is one who is part of an organization that can hold institutions accountable for

positive change, autonomously practice agroecology, and have market plasticity. I argue that another necessary axis to help address the above questions is inter-organizational solidarity, where organizations not only challenge institutions like the state to enact change but work to support other organizations (or individual producers) to collectively advance to the alternative paradigm of agroecological market integration.

INTA recently concluded an extensive survey in the study area, which could be used to inform future research. This study could be replicated with a more comprehensive array of producers representing a larger sample size of the network of organizations in the study region. The survey results could be used to disaggregate producer commercialization activities and agroecological practices by identities such as gender, age, education level or countries of origin. Survey data could also examine the degree of impact the lack of basic services (such as land tenure, access to transportation and quality of infrastructure) on agroecological practices or commercialization activities.

Finally, future studies could use a more diverse unit of analysis, working with institutional or industry representatives to evaluate their perspectives on the allyships needed for agroecological market inclusion. This could be useful in understanding which, if any, disparities in responses must be addressed for greater solidarity across stakeholders in the agricultural sector.

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Appendix

Protocol: Participatory Activity 1

UC Davis/Universidad Jauretche/INTA

Participatory Mapping of Influence/Social Networks and Commercialization

Research Activity: Participatory mapping to determine the social alliances that facilitate agricultural producer commercialization in Berazategui, Argentina.

Research purpose: The purpose of this research is to facilitate a better understanding of the role of social capital in the promotion of commercialization for agricultural producers in Berazategui, Argentina. This activity also will permit interested producers to obtain a better idea of the role of social capital and exchange ideas on how to strengthen social capital to promote market integration. Our methodology is Participatory Action Research.

Participants and facilitators: This activity will involve representatives of agricultural producer organizations in Berazategui, Argentina. The activity will be facilitated by myself (a student researcher at UC Davis), a representative from INTA and a representative from Arturo Jauretche National University.

Protocol:

- Introduction (5 min):
    - This project is a result of a collaboration between INTA/Jauretche University and myself as a student researcher from the University of California in the United

States. Together we are looking at avenues for strengthening your commercialization opportunities. This activity will help us to understand the network of alliances and support that you participate in, and how these networks can support you in obtaining improved access to local markets.

- *Discussion about privacy, confidentiality, how we will use the data and share information back with this group (explain this discussion is in compliance with IRB). A note: we will provide as brief of a description as possible here so as not to generate any mistrust, as this is not a common conversation to have during local research projects.*

- Part 1: Existing commercialization channels (20 min)
  - As a group, discuss: **In which commercialization channels or markets are you currently participating?**
    - Dr. Gustavo Tito will help to write out notes in a table situated on a large poster board:

Organization	Commercialization Channel 1	Commercialization Channel 2	…

  - Next, discuss: Which channels are the most important for you? Why?
- Part 2: Thinking on an organizational-level, **who have you worked with to gain access to these commercialization channels? (45 min)**

- *Write names of allies (15 min): We can give examples, like INTA, Jauretche, the municipal government, etc.*
    - Each participating producer organization has 3 sticky notes (a distinct color for each organization). In each sticky note, **write the name of the person or entity that has served as an ally for you in obtaining access to a commercialization channel.** Draw one to three stars, ranking each ally from least important (1 star) to most important (3 stars) in terms of the level of support that you have received from them.
- *Lena will collect sticky notes from each organization and ask them which commercialization channels these allies have helped with. It would be good to have notetakers write down responses. (30 min)*
    - *How have you worked with this ally to support your access to this/these market(s)? How could alliances ranked with just one star be improved?* (Note: these questions received little attention by participants.)

- Part 3: Thinking towards the future (15 min)
    - **What commercialization channels are you not currently participating in but would like to participate in sometime in the future?**
        - Share thoughts aloud as a group, Lena or Dr. Tito can write these out on a poster board.
            - If we are set for time, we can discuss what the barriers/challenges are for participating in these markets (+20 min) (Note: we discussed this at length.)

- Part 4: How can we obtain these market opportunities and overcome the barriers that we just discussed? (45 min)
    - Producer organizations will each have 3 additional sticky notes. In each sticky note, **write out a potential alliance that could support you organization in achieving the marketing opportunities written on the board.** Put 1 to 3 stars for the level of importance that this alliance would have (3 being the most important). (15 min)
    - *Lena will collect the sticky notes from each organization and ask which commercialization channel they pertain to. Again, it would be helpful for notetakers to annotate responses. (30 min)*
        - *In what ways could this alliance support your organization to overcome existing barriers to have access to these potential commercialization channels? Why are the alliances with 3 stars so important? How could the alliances ranked less than 3 stars be improved upon?* (Note: by this point, producers were becoming quite fatigued by the full day of activities, we kept this discussion abridged and expanded upon it in the following participatory activity.)

Part 6- Closing remarks and summary (15 min)

- Review what we will do with the data and how we will be presenting the results back to the group *(with the support of Dr. Nugent/Dr. Tito)*.
    - We will present results back during a workshop on May 30. We want to make sure that the information is clearly understood by everyone.
- What questions do you all have about what we did today?

- Ticket out: make sure that we have your contact information and we know whether or not you would like to participate in the next data collecting activity. (Note: we did not have time for this, extension contacts already had their contact information, so this was not necessary.)
- Express gratitude