

# Building Sustainable Food Systems in the Asian Century: A Matter of Tradition

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I couldn't tell if Julio was angry or excited as he boomed from behind the principal's closed door. This was the last school visit in an exhausting series of meetings that 2016 summer day in our quest across Rio de Janeiro to build support for the municipal government's Hortas Cariocas urban farming initiative. When he invited me the day before to visit some of his projects, I had imagined a casual trek through a few of the program's fruit and vegetable gardens. Reality dawned at 8:15 a.m., when we left the municipal secretary of environment to assemble a delegation of school policy advisors at the Ministry of Education. There was nothing casual about the ensuing negotiations, explanations, and attempts to find common ground among environmental protection officers, education officials, and school administrators.

Where would Julio's proposed garden fit within the school grounds? Who would arrange the required teacher training in horticulture? And what incentives would the school be offered for participating in the Hortas Cariocas program? Such contentions generated fiery discussions at each of the seven schools and communities we visited across the city that day. A journalist researching the program told me that, except for my presence, this was a normal day. I had been invited, she revealed, because bringing along a foreign professor would strengthen Julio's argument that organic fruit and vegetable production in and around the world's cities is critical for generating incomes, reviving lost connections to land, and educating publics about food traditions.

Julio's approach aligns with the advice of the United Nations Food and Agriculture Organization that governments should fund urban/peri-urban agriculture as "a key component of robust and resilient urban food systems" (FAO 2014, i, 84). As

he put it, "Community gardens won't solve global hunger, but they can provide jobs and a real response to a global problem" (interview, November 21, 2015).

The point is salient in Brazil and other countries where industrial soybean plantations, expanding to meet growing demand from China, are encroaching on fresh food farms and forcing an exodus of young people into cities. According to the World Wildlife Fund, "the soybean industry is causing widespread deforestation and displacement of small farmers and indigenous peoples around the globe" (WWF 2021). Between 2000 and 2014, Brazilian land dedicated to intensive cropping doubled to 46 million hectares, and in 2020 soybeans were again the nation's top export, worth \$26 billion (Zalles et al. 2019; UN-Comtrade 2021).

China is the world's largest importer of soybeans, making Brazil the leading exporter of the protein-rich grain and biggest importer of chemical pesticides and fertilizers (Hiratuka 2019). Trade with China may have advanced Brazil's strategy of economic diversification, but as Borges and Talavera (2013, 314) argue, this has incurred "negative social and environmental impacts."

Citing points like these to argue for more diverse and balanced food systems, by 2021 Julio had secured municipal funding for urban farms and associated salaries in 24 communities and 25 schools, producing 80 tons of fruits and vegetables each year. COVID-19 has revealed the importance of this work as food shortages intensify in Rio's most disadvantaged suburbs, generating mainstream press coverage of the largest Hortas Cariocas garden in the suburb of Manguinhos (Barbon and Cheibub 2021).

Two hours into the school meeting the negotiations showed no sign of winding up, so I escaped “to the bathroom.” Exposed light bulbs outside the principal’s office, irresistible to circling moths and other nightlife, dimly lit a noticeboard featuring students’ designs of sustainable cities. Meticulous plans for environmentally friendly apartments and schools decked with solar panels and vegetable gardens offered answers to the question glued above in green cut-out letters: “Quais são as grandes questões para o nosso futuro?” (What are the big questions for our future?) Casting my mind back across the day’s visits to inquisitive classrooms and cautious staff rooms, I recalled the question posed by a teenage student: “Why does Brazil need to produce so many soybeans?” The beginning of Julio’s answer, “It’s a little complicated . . . ,” provoked memories of the year I had spent living with families in Beijing.

### Dinnertime in Beijing

As a de facto member of the Wang family in the South Beijing suburb of Pu Huang Yu, I was required to follow a daily routine: walk the dog with the family at 8 a.m., jam into the subway station by 9 a.m., and most importantly be home for dinner by 6:30 p.m. For Mr. Wang dinner time was a ceremonial occasion. Placing the large glass bowl in the center of the living room table, he would announce the dish he had prepared that day for his wife, daughter, and me. We enjoyed lamb, beef, and chicken almost every evening, but pork was his specialty, evident in the flare he added when exclaiming “京都排骨!” (Kyoto pork ribs!) I had first met Mr. Wang while living nearby in 2007, shortly after he moved his family from a corn farm in Hebei Province into the cramped high-rise apartment. Even without the rent I was paying, his job as a clerk in the administration office of his residential complex (*hua qiu*) sustained a diet that a decade before would have been unthinkable.

It is difficult to fully appreciate the deepening socioeconomic importance of pork in China. The OECD (2021) calculates that Chinese pork consumption per capita increased from 23.9 kg in 2000 to 30.3 kg in 2018, stimulated by “higher incomes and a shift—due to urbanisation.” To diversify consumption, the government has

promoted mutton and other sources of protein since 2018, but pork remains the clear favorite. As the New-Type Urbanization Plan increases China’s urban population from 850 million in 2014 to one billion people by 2025, demand for pork is set to grow. To sustain the expanding herds requires soybeans processed into animal feed, forming a global chain that stretches from Mr. Wang’s dinner table to South America’s soybean plantations and Julio’s fruit and vegetable gardens in Rio’s schools and communities.

To Beijing’s Northeast, an hour’s bus ride beyond the last subway station at Fengbo, a progressive community was forging an alternative peri-urban future. Founded in 2012 as an independent community-supported agriculture (CSA) cooperative, Shared Harvest grew over the subsequent five years to support over 40 farmers on 36 hectares of government-awarded land. Leaving behind stagnating villages, its members had avoided the precarity of the city’s construction, factory, and informal sectors. Instead, when I first visited in 2015, they were using their knowledge to produce organic pears, pumpkins, maize, sweet potatoes, okra, mushrooms, poultry, and pork for delivery to over eight hundred Beijing families each week. Shared Harvest’s director, agricultural scientist Dr. Shi Yan, viewed her work as cultural conservation: “By providing these jobs we offer a dignified occupation that leverages the community’s skills and ancient connections to land” (interview, July 31, 2017).

Harnessing a displaced community’s capacities, Shi’s response to urbanization and industrial agriculture is, like Julio’s, embedded in a sense of tradition. This human capital has strengthened her position with the Beijing government, which has provided a methane bio-gasification energy plant to produce power and fertilizer, and an extension of her lease until 2027. Shared Harvest’s success has since inspired the creation of over a thousand community farms across China (Lyu, Yang, and Wang 2020). Many of these are founded by Shi’s former students, and all of them are actively building public and private sector alliances to advance small-scale, nonindustrial approaches to agriculture.

## A Comparative View from Australia's Grain Fields

The ripples of Chinese urbanization and the demand for natural resources it is generating extend around the world, interacting with old traditions of land and livelihood. The effects are acute in Australia, which relies on China—its leading trade partner—to purchase around 40 percent of all exports. As in Brazil, a prior colonial regime all but extinguished First Nation or Indigenous connections with land and food to lay the foundations of industrial agriculture and mining. Of these extractive pursuits, the former's social and geographic consequences are more visible, publicly exposing the human and ecological impacts of twenty-first-century globalization.

Writing in Melbourne, where I now live, it is striking that, as in Brazil, peri-urban farms are disappearing as the city expands. Focused on agribusiness export, the state and federal governments appear unconcerned that the wheat, barley, and canola plantations expanding toward the city's north cannot fulfill local demand for fresh food. Rising land taxes leave little hope for vegetable and fruit farmers, whose capacity to supply the city is projected to fall from 41 percent of demand in 2021 to 18 percent by 2050 owing to declining availability of affordable land and the Agriculture Victoria Strategy's focus on exporting to Asia (Carey, Sheridan, and Larsen 2018, 67).

The industrial export model of agriculture that predominates in Australia aligns with Chinese commodity trade and investment, provoking concerns among socially and ecologically conscientious observers. But contentions about the socio-ecological impacts of agribusiness have little traction in mainstream politics and media. By contrast, more alarmist assertions—often resembling those articulated in Brazil—are widely circulated. Reports of an “alarming level of Chinese ownership of Australia” resemble accusations that China is “attempting to buy Brazil” (*Estadão* 2010; Parsons and Stevens 2020). Chinese investment is regularly portrayed in both countries as an attempt to grab land, enable an influx of Chinese workers, and underpin strategic threats to national interests. These concerns are evident in the the annual

Lowy Institute Poll, whose findings between 2014 and 2020 show that, on average, 64 percent of respondents believe the Australian government is “allowing too much investment from China” (LIIP 2020).

Hostility toward China has been deepened by trade tariffs imposed by the latter on Australian barley, beef, and wine in 2020. Emboldened by the anger of farmers, in 2021 the federal government voided the state of Victoria's Belt and Road Initiative agreement with the Chinese government on the basis that it was “not consistent with Australia's foreign policy” (Callanan 2021). While farmers have temporarily offset China's tariffs by diverting 2021 harvests to Saudi Arabia, their long-term strategy remains dependent on Chinese demand. With or without the Belt and Road, the production of grains is therefore the nation's fastest growing export, earning US\$3.5 billion in 2020 and demonstrating that political obstacles rarely impede international trade (UN-Comtrade 2021).

It falls to progressive small businesses and nonprofit organizations to defend the viability of Australia's small farms. Among these organizations, Sustain, CERES, Cultivating Community, the Collingwood Children's Farm, the Open Food Network, 3000Acres, and Plan-It Rural have become pillars of support for Melbourne's food system diversity. A branch of CERES called Fair Food now supplies more than a thousand Melbourne families each week with fresh fruits and vegetables sourced from around one hundred local growers, creating jobs and protecting land from real estate development. These results helped to inspire the suburb of Moreland's US\$25,000 Food System Strategy, the first funded framework in Australia to incentivize productive use of urban arable land. Fair Food's director, Chris Ennis, describes the initiative as “a tool for public education about the social and environmental history of Australia's food system” (interview, September 17, 2018). As Ennis (2012, 6) writes in a CERES newsletter, “Over the past 12,000 years, the age of agriculture, most of us were farmers. In Australia in 1900 one in seven of us were farmers, today only one in 33 grows the food we eat.”

Data from the Australian National Pandemic Food Survey, conducted by the nonprofit organization Sustain, show that personal and community food growing have helped to alleviate the social isolation and financial stress brought by COVID-19. Of 9,140 respondents, more than 80 percent indicated that urban farming made the pandemic less distressing because it “increased food security, heightened wellbeing, and improved social connections” (Phillips et al. 2021, 2). In a nation where one quarter of the population was born overseas, culturally diverse approaches to crop selection and cultivation are contributing to a boom in urban farming (Dun et al. 2018). As in Rio and Beijing, in Melbourne gardeners and small farmers are harnessing food growing skills and traditions to inspire policy innovation and cultural change.

### **Conclusion: Tradition Matters**

The scenarios described above from Brazil, China, and Australia show bottom-up community agency interacting with top-down political structures. Examining them from the ground up reveals that local initiatives can be as transformational as global agribusiness. As Don Nonini (2014, 411) writes, “food provisioning is at the heart of human sociality, and takes specific cultural forms; it is always morally inflected and politically significant; and it is organized at multiple scales.” Such recognition of local agency is easily lost in debates about international agriculture, especially when framed by politically heated accusations that China’s growth is undermining other countries’ national interests.

Rejecting simplistic portrayals of China’s global expansion, Gustavo Oliveira (2021) writes that “the issue is not whether Brazil is economic prey to China, but rather whether Brazilian and Chinese peasants and workers are prey to domestic and transnational corporate elites and the state actors who enable and advance their power and profits.” From this perspective, the actions of the Chinese (or any other) state are not the underlying problem; rather, it is the unjust transformations of land and labor arising from global capitalism.

Adding to Oliveira’s observation, I suggest that the daily endeavors of people like Julio, Shi, and Chris are also transformational. Julio procured municipal subsidies for urban farmers to create 49 Hortas Cariocas fruit and vegetable gardens in some of Rio’s most underserved communities. Shi employed rural migrants from Beijing’s outskirts and negotiated government grants of land and infrastructure for Shared Harvest, inspiring the creation of more than a thousand community farms across China. Chris built CERES Fair Food into a leading Melbourne delivery service by creating retail opportunities for urban and peri-urban farmers, providing proof of concept for Moreland’s Council’s Food System Strategy. In all cases, community agency, premised on traditions of land and livelihood, stimulated structural change.

Traditions of food growing, like all traditions, are inevitably revived, reformulated, and deployed to support the agendas of the day (Ortner 1991). Community farming is therefore susceptible to manipulation, for instance by developers of exclusive eco-apartment blocks and shopping malls featuring gated vegetable gardens and fruit trees. Such ventures appear to be progressive, but they do nothing to educate publics or to diminish reliance on industrial agriculture; on the contrary, they divert attention from unfolding histories of colonial and neocolonial extractivism (Hearn et al. 2020). Julio, Shi, and Chris deployed notions of customary knowledge in a different way: to promote public education and health in partnership with rural migrants and farmers.

As the world’s cities expand, the outward encroachment of new suburbs onto peri-urban farms, compounded by the inward growth of commodity plantations, implies looming challenges for sustainable food production. The cases described above expose these challenges but also demonstrate that communities can push back more effectively when their projects and proposals engage with history and local knowledge. Building sustainable food systems in the Asian century, perhaps more than ever before, is a matter of tradition.

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