

## Insights into the evolution of China's agri-food system



*China. Tractors help reduce labour but cattle are still essential in sustaining agroecological practices. Guizhi Xiong@Greenpeace*

*Angus Lam joined GRAIN in 2022, after working for over 25 years in China and across Asia in support of local food movements, community seed systems, farmers' co-learning networks and GMO campaigns. In this conversation between him and GRAIN researcher Devlin Kuyek, Angus shares some insights on past and present developments in China's food system, based on his experience in working with farmers and food movements in mainland China.*

***Devlin: Can you tell us a little about the work you were doing in China before joining GRAIN?***

**Angus:** Over a period of about two decades, I worked closely with farmers and grassroots organisations in rural China, supporting agroecological practices, community seed systems and what is called the young farmers' movement. Part of my work involved helping farmers to understand the impacts of agricultural industrialisation and globalisation on their farming systems. My experiences during that period provided me with a window into the rapid

agricultural transformations taking place in the countryside, and, in particular, the changes happening at the community level caused by policies of privatisation and globalisation.

***Devlin: Can you tell us a little about these major changes that Chinese farmers were living through when you began working with them?***

**Angus:** The transition really began to take off in the 1980s during the economic reforms brought in by Chairman Deng Xiaoping. In the agricultural sector these reforms included policies such as the Household Responsibility Scheme, which replaced the collective farming system. Under this scheme, farmland was allocated to peasant farmers according to the size of their households, and farmers could decide what to grow and where to sell their products, as “markets” were introduced to the rural economy. Agriculture production thus largely shifted from being community-oriented to market-oriented.

A similar shift happened with the supply of agricultural inputs, going from a state-coordinated system to a fragmented, private supply system. A market for seeds and agrochemicals started to emerge. In this initial stage, small domestic enterprises and government-controlled seeds or agrochemical stations (known as fertiliser stations & plant protection stations) “shared” the supply system. The enterprises were responsible for marketing while the government-administered stations were tasked with governance. But in reality, it was most often a case of “one institution with two names”, as the governance and market functions overlapped and were interdependent. Local officials would use their government authority to privilege market activity. For example, officials often “instructed” farmers to purchase fertilisers or hybrid seeds from certain brands.

I can give you one example to illustrate such a scene in rural China, which I heard from a retired agricultural extension agent in Guangxi, a province in southwest China. Over a few years in the early 1980s, he led a team of local agricultural extension agents to promote free chemical fertilisers to the communities. He soon realised that the farmers were pouring out all the chemical fertilisers into the rivers, since they already had a rich supply of organic manure and had no need for the free chemical fertilisers. The farmers were only interested in keeping the plastic fertiliser bags, since plastic bags were still a rare resource in rural China at that time. Nevertheless, the authorities were “creating” a market for peasant farmers under the name of technical services to generate profits for the enterprises closely tied to them.

***Devlin: Were those chemical fertilisers and pesticides subsidised by the government?***

**Angus:** In the early years, most of them were subsidised by the government, and were offered to the farmers as free samples via extensive promotional campaigns in order to encourage their use. Farmers were sceptical about the agrochemicals at first, and saw no real use for them, as organic manure was widely available and pests and diseases were effectively controlled by local seed varieties and traditional practices.

But this began to change in the 1980s through the government's heavy promotion of high-yielding crop varieties that were highly dependent on chemical fertilisers and pesticides, and by the government's massive investment in chemical fertiliser production and imports. Over a hundred new fertiliser plants were set up every year across China, reaching a total of over 1,500 in 1987. Simultaneously, China imported 24 million tons of urea for several consecutive years from 1982 to 1987.

Ironically, the urea imports soon undercut the domestic fertiliser industry, leading to a massive shutdown of the small-scale fertiliser plants, especially those producing ammonia-based fertilisers. In 1986, Qin Zhongda, head of the Ministry of Chemical Industry, proposed to the state government an upgrade from "ammonia to urea", which required a more sophisticated manufacturing process. This led to major restructuring of the industry, with control shifting to large companies called "leading enterprises".

***Devlin: Did these kind of companies also take over other parts of the country's food and agriculture sector?***

**Angus:** Yes. They emerged as a response to a crisis with the initial model of reform. By the late 1980s, the state's focus on urban development was already starting to generate a massive migration of peasant farmers to urban centres for work in factories. Agricultural production slumped as a result.

The state responded with a new policy in 1998 to promote agricultural industrialisation. In essence, this meant replacing small-scale farming (viewed as backward and unproductive) with large-scale agribusiness (viewed as efficient and modern). To do so, the government opted to replace the local markets encouraged under the early years of economic reforms with contract farming systems managed by agribusiness companies, known as "dragonhead enterprises".

Local governments were tasked with providing incentives to encourage the growth of these enterprises, and public agricultural services were scaled back. The new "dragonhead enterprises" took control over the supply and sale of inputs, the provision of information and the marketing of agricultural products for the farming households, and they quickly expanded their control to the whole supply chain and food system, including grains, vegetables, seeds, fertilisers, livestock, processing and trading. By 2010, there were over 120,000 of these agribusiness companies.

All these changes transformed the relationship between farmers and the land. In the traditional Chinese village, farmers had a strong connection to the land. Under the new agribusiness structure, farmers were integrated into companies that were only concerned by short-term economic benefits. They started using the hybrid seeds and chemical fertilisers provided under the contract arrangements of the agribusiness companies, even as this caused serious chemical pollution to the local soils, water sources and ecosystems. Soon only elder

farmers remained in the countryside, left alone to navigate the increasingly difficult socio-ecological challenges.

***Devlin: How did things change when China joined the WTO?***

**Angus:** The WTO accession pushed China to open up to agricultural imports and foreign investment. In the late 1990s, China was still self-sufficient in food. Because of huge population pressures, China cannot deliberately lower its food sufficiency rate like neighbouring countries have done, such as South Korea or Japan. The commitments to grain self-sufficiency and to open markets through the WTO thus constituted a fundamental contradiction in shaping China's food policy after 2000.

More importantly, the impacts of the entry into the WTO should be considered across the whole food system, which had already been transformed by a two-decade-long agricultural industrialisation drive. When China joined the WTO in 2001, a domestic, corporate-based food system was already in place that could then merge with the global one.

The "contradiction" between self-sufficiency and imports led the country in two directions. On the one hand, China started to put a tremendous budget into agricultural research, predominantly plant breeding, biotechnology and genetic engineering to try and "modernise" its agriculture and boost production. The government turned to agricultural technology as the main way to compensate for the loss of farmland and rural manpower caused by rapid urbanisation.

In early 2000, the public agricultural extension network was largely dissolved and transformed into a promoter of corporate-led technological packages. Many township-level extension agents were transferred to other administrative tasks, such as enforcing the "one-child" policy. At the same time, more and more researchers from the public sector were hired by agribusiness companies as technology consultants to negotiate with local governments and promote products to the communities.

Government-funded agricultural research outputs were no longer disseminated to peasant farmers through the public systems but, instead, through the private sector. Agribusiness companies were often given subsidies to showcase scientific innovations and their related products. Moreover, the transmission of local agricultural know-how was substantially disrupted as the rural youth abandoned farming.

On the other hand, the accession to the WTO began a process of deep integration that required the implementation, monitoring and enforcement of newly harmonised standards to fit into the global trade regime. This "monitoring and standardisation" logic then spread throughout the agri-food systems and governance decisions.

In the mid-2000s, food safety scandals exploded in the country, resulting from excessive agrochemical use and misconduct among corporate food processors driven by short-term

profits. For the first time, food safety became a bigger concern than food security within China.

Yet, ironically, the state's response to the food safety scandals was to bring in legislation that only further entrenched corporate standards and practices, ignoring the fact that corporations were involved in nearly all of the major scandals and outbreaks. These regulatory policies decimated the smallholders, decentralised food processors and local markets that were not part of the problem.

Nevertheless, the food scandals fostered a vigorous, popular food safety movement in China. It coincided with a rural reconstruction movement that grew from the reverse migration to the countryside that began in the early years of the 20<sup>th</sup> century, as people grew disillusioned with life in the cities. There was a lot of overlap between those concerned about “food safety” and the “rural reconstruction” movements and this soon catalysed into a synergistic, civil-society driven local food movement between 2005 to 2010.

***Devlin: Can you tell us a little more about this movement?***

**Angus:** The local food movement emphasises values of trust, rural-urban mutual support, local knowledge and care for peasant farmers. It emerged in response to the food scandals and rural recessions, and the loss of relationships between the older generation of farmers and the rural youth. The movement established new models of food markets in the forms of community-supported agriculture (CSA), farmers’ markets, and buying clubs that were launched across the country. Many of these are based on producers and consumers negotiating trust rather than relying on the quality assurance of standard setting. During the Covid lockdown in Shanghai last year, the CSA system helped to provide local residents with the food they needed when commercial supply chains were disrupted. Such alternative markets are gaining support within China and these values-oriented models point to interesting trajectories for the future of China’s larger food system.

***Devlin: Is there support for food sovereignty and agroecology within these new movements in China?***

**Angus:** The concept of food sovereignty has no direct translation in China within social movements. And “agroecology” has unfortunately been narrowly interpreted by Chinese scientists using a technical perspective similar to ecological agriculture. Some researchers even translate “agroecology” as “organic farming”.

However, the Movement's actions and models are largely inspired and learned from the international agroecological and food sovereignty movements that originated across the world in the late 80s to early 90s. Hence, some common principles or values can be identified between the local food movement inside China and the global movement, which can lead to constructive dialogue or exchange.

***Devlin: How have these transformations to China's food system influenced the country's actions overseas?***

**Angus:** The launch of the Belt & Road Initiative (BRI) in 2013 marked a new phase in China's global food strategy. It established the goals and strategies of China's overseas agribusiness investment in different geographical regions, covering over 150 countries across Asia, Europe, Africa and Latin America. Essentially, the BRI opens up political space and provides infrastructure for China to access food from an expanding number of global sources.

China's food strategy always lies within a tripod framework: ensuring grain self-sufficiency due to population pressure; accessing global food imports to meet changing dietary demands (especially more meat and dairy); and, enhancing infrastructure investments to amplify its influence in the global food supply system.

It is worthwhile to note that China's overseas agribusiness projects are often pursued with long-term objectives and involve massive infrastructure construction. These strategies thus enable the country to develop alternative trade routes or new areas of crop production for food exports to China.

For example, China recently signed a deal with Tanzania to export soybeans to China. The project is being led by Longping Agriscience, a seed dragonhead enterprise owned by the CITIC Group, a Chinese, state-owned investment company. The deal involves the construction of a 50,000-hectare large-scale farm in Mbeya, a city in southwest Tanzania, specifically for soybean and maize production.

China-Africa cooperation goes back many decades but its form has shifted over time. Today it is characterised by China's interest in boosting the production of exports to China and involves the dissemination of a package of technology, expertise and financial investment, often via Chinese companies, to encourage African countries to replicate the Chinese agricultural model, often under the name of bilateral cooperation or development aid.

***Devlin: What are some hopeful directions that you see for China's food movements?***

**Angus:** The global food sovereignty movement says that "the answer lies in supporting small-scale farming, not in agribusiness". This value is also embedded in China's flourishing local food system movement and has started to be taken up in cross-sector networks that are challenging the capitalist food system and opening up space for alternative trajectories for the future of China's food system. It is also inspiring to see young farmers from diverse backgrounds uniting to practise agroecological farming in the country. And, I think that as researchers and analysts delve deeper into China's agribusiness and global food strategy, they are providing valuable insights that are assisting food movements in China to navigate through the various challenges they encounter.