

Perseverance in the Face of Hardship: Chinese Smallholder Farmers' Engagements in Ghanaian Agriculture

Lu Jixiaⁱ, Yu Lerongⁱ and Henry Tugendhatⁱⁱ

August 2015

- This paper was produced as part of the China and Brazil in African Agriculture (CBAA) Project work stream

China and Brazil in African Agriculture

Working Paper Series

<http://www.future-agricultures.org/research/cbaa/8031-china-brazil-paper-series>

This Working Paper series emerges from the China and Brazil in African Agriculture (CBAA) programme of the Future Agricultures Consortium. This is supported by the UK Economic and Social Research Council's 'Rising Powers and Interdependent Futures' programme (www.risingpowers.net). We expect 24 papers to be published during 2015, each linked to short videos presented by the lead authors.

The CBAA team is based in Brazil (University of Brasilia, Gertulio Vargas Foundation, and Universidade Federal do ABC), China (China Agricultural University, Beijing), Ethiopia (Ethiopian Agricultural Research Institute, Addis Ababa), Ghana (University of Ghana at Legon), Mozambique (Instituto de Estudos Sociais e Económicos, Maputo), Zimbabwe (Research and Development Trust, Harare), the UK (the Institute of Development Studies, the International Institute for Environment and Development and the Overseas Development Institute).

The team includes 25 researchers coming from a range of disciplines including development studies, economics, international relations, political science, social anthropology and sociology, but all with a commitment to cross-disciplinary working. Most papers are thus the result of collaborative research, involving people from different countries and from different backgrounds. The papers are the preliminary results of this dialogue, debate, sharing and learning.

As Working Papers they are not final products, but each has been discussed in project workshops and reviewed by other team members. At this stage, we are keen to share the results so far in order to gain feedback, and also because there is massive interest in the role of Brazil and China in Africa. Much of the commentary on such engagements are inaccurate and misleading, or presented in broad-brush generalities. Our project aimed to get behind these simplistic representations and find out what was really happening on the ground, and how this is being shaped by wider political and policy processes.

The papers fall broadly into two groups, with many overlaps. The first is a set of papers looking at the political economy context in Brazil and China. We argue that historical experiences in agriculture and poverty programmes, combine with domestic political economy dynamics, involving different political, commercial and diplomatic interests, to shape development cooperation engagements in Africa. How such narratives of agriculture and development – about for example food security, appropriate technology, policy models and so on - travel to and from Africa is important in our analysis.

The second, larger set of papers focuses on case studies of development cooperation. They take a broadly-defined 'ethnographic' stance, looking at how such engagements unfold in detail, while setting this in an understanding of the wider political economy in the particular African settings. There are, for example, major contrasts between how Brazilian and Chinese engagements unfold in Ethiopia, Ghana, Mozambique and Zimbabwe, dependant on historical experiences with economic reform, agricultural sector restructuring, aid commitments, as well as national political priorities and stances. These contrasts come out strikingly when reading across the papers.

The cases also highlight the diversity of engagements grouped under 'development cooperation' in agriculture. Some focus on state-facilitated commercial investments; others are more akin to 'aid projects', but often with a business element; some focus on building platforms for developing capacity through a range of training centres and programmes; while others are 'below-the-radar' investments in agriculture by diaspora networks in Africa. The blurring of boundaries is a common theme, as is the complex relationships between state and business interests in new configurations.

This Working Paper series is one step in our research effort and collective analysis. Work is continuing, deepening and extending the cases, but also drawing out comparative and synthetic insights from the rich material presented in this series.

Ian Scoones, Project Coordinator, Institute of Development Studies, Sussex

Acknowledgments

The authors are grateful to Kojo Amanor for his great efforts to coordinate contacts, transport and interview arrangements during the field work; Seth Cook, Lila Buckley and Langton Mukwereza for reviewing and editing the draft of this article; and Ian Scoones and other CBAA project colleagues for their generous feedback at various stages in the process of writing this paper.

Abstract

This paper uses qualitative research methods to study small-scale Chinese farmers in Ghana, in contrast to research generally found in mainstream media and academic literature which focuses on large-scale Chinese farms in Africa. Through field-based observations of three small Chinese-run farms, this article explores how some Chinese expatriates are engaging in agricultural development in Ghana. We argue that this engagement contributes diverse new agricultural products to the local market. Furthermore, we find that the activities of these farmers are driven by increasing numbers of Chinese migrants in Africa, and that instead of being powerful competitors, they are in fact squeezed into the margins of the local market. They meet the needs of a specific niche market through perseverance and learning from failure. In doing so, they face unfamiliar challenges from both the natural climate and the social environment, and they are at a disadvantage in this process compared to local farmers who have over the years developed better adaptive mechanisms. Looking ahead, a decline in the specialised market for Chinese goods caused by a decline in Chinese migrant labour presents real challenges for the future viability of small Chinese farms in Ghana.

Keywords: China, Africa, farming, small-scale

If you visit JH Chinese Supermarket in Tema early in the morning, you will see a large pile of vegetables: chili, cucumber, cabbage, chives, zucchini and green leafy vegetables. The vegetables are oddly shaped and look home-grown, suggesting a sparse use of chemical fertilisers. When the authors visited, there was a batch that had just been delivered that morning by one of the family members of the supermarket who runs a farm they own nearby. There were also potatoes, ginger, garlic and dried food goods imported from China. When the doors open, Chinese and a few Korean and Indian consumers come streaming in. Embassy employees, businessmen, young women and labourers scramble to grab the vegetables as quickly as possible. They take them in large quantities and stuff them into bags. They are not picky about the quality; they just ensure they get the amount they need and leave. Within an hour or two, there is hardly anything left—just a few scraps of leaves and odd vegetables, next to the rice imported from Thailand. Compared to supermarkets in China, it is a bit of a mess and goods are sparse on the shelves, much like you would see in a township supermarket. There is Chinese TV playing in the entrance corner. In addition to the vegetables, they sell household goods like socks and shampoo and packaged foods from China. In the supermarket, you feel like you are in China.

Most research on Chinese agricultural engagements in Africa focuses on agricultural aid or large-scale State Owned Enterprise (SOE) investments. However, there is also a growing number of small-scale farms run by individual Chinese migrants and their families on the continent. In terms of large-scale Chinese agricultural

investments, the authors have only encountered one such case in Ghana. This involved modern mechanised technologies aiming to produce rice for the local Ghanaian market, managed by the SEO Ningxia Corporate Farm (宁夏农垦). This study, however, focuses on a collection of small-scale Chinese farms in Ghana that fill a very different niche. They are characterised by strong personal networks and family relations, and supported by an expatriate population trying to make ends meet.

This paper explores how these farms are established by individuals with no prior farming experience in China, and how they learn through trial and error, with fierce competition among themselves and with local Ghanaian farmers. Their farming techniques are rudimentary and rely heavily on manual labour, with production focusing on fresh vegetables targeting the local Asian expatriate market. Despite considerable hardship in a limited market and foreign terrain, these farmers persevere, producing a new kind of market outside of the constraints of modern day China. Furthermore, this Chinese food production becomes an arena for Chinese expatriates to connect with each other and strengthen the bonds among the diaspora community.

Research Methods

This research aims to shed light on these largely hidden activities through field-based research conducted in 2013, including observations of Chinese farms, supermarkets and local markets. We also engaged in interviews with Chinese farmers, consumers, food retailers and government officials, as well as one Ghanaian farmer and one Ghanaian employee of a Chinese farm. The authors spent 20 days conducting fieldwork in Ghana in December 2013. We started our investigation with a list of Chinese farms (12 in total, including six fisheries, two poultry farms and four vegetable farms) provided by the Ghana Investment Promotion Centre. We contacted all four vegetable farms but two phone numbers did not work, so we began by visiting the two farms that we were able to contact. On the way to one of them, we mistakenly went to a third Chinese farm, which was not on our original list. We spent time with the Chinese farmers and one Ghanaian farmer on their farm, conducting interviews and using participant observation to gather field data. We asked the farmers for additional contacts with other farms, but they did not seem to know of any others. We also conducted interviews with the Chinese Embassy and the Ghanaian Ministry of Agriculture. In total, we interviewed 27 people during our field work. The recordings, transcriptions and analysis from these interviews formed the main research material for this paper.

Background

It is well known in China that since Mao's era there have been groups of Chinese people dwelling in Ghana who originally came over as aid experts. More recently,

since 2006 the development of the gold market in Ghana has brought a new influx of Chinese migrants (Liu 2014; Mohan et al. 2014). Although there is no accurate data on Chinese migrants in Ghana, some have estimated that the total stands in the range of 6,000-10,000 or 7,000-20,000 (Mohan et al. 2014; the first range is attributed to Marfaing and Thiel 2011). Most of them are concentrated in the major commercial cities, such as Accra, Tema and Kumasi, while others are in townships or in rural areas working in the extractive and mining industries.

Those who work in Accra are often attached to either Chinese SOEs, large private companies or Chinese construction companies. In Tema, an industrial and harbour complex to the east of Accra, Chinese companies have a notable and long-standing presence. Beyond trade and industry organisations there are a number of other Chinese businesses such as hotels, beauty salons, acupuncture clinics, a sizeable state-owned fishing operation, a few Chinese supermarkets and several restaurants, some with a guesthouse or casino attached (Mohan et al. 2014). Ghana was described by most respondents as a pleasant and enjoyable destination for Chinese migration, until the summer of 2013, when a group of Chinese gold miners were killed. Following this, the wider Chinese community of gold miners in the area were expelled by the local government.

Overview of the farms: HZ farm, FS farm and HN farm

At the time of our visit, all of the Chinese agricultural companies in Ghana were either state-owned or private. There are some multinational companies such as Sino-Geo (an infrastructure construction company), Sino-Hydro and Ningxia Agricultural Corporation planning to explore the establishment of rice plantations in Ghana to sell in the local Ghanaian markets. At the same time, there are also a number of small Chinese farms operating within the country. The farmers we visited produce vegetables and cowpeas for the domestic market and one farmer has invested in *Jatropha*.

We began by sourcing a list of 12 Chinese farms registered between 1994 and 2013, provided by the Ghana Investment Promotion Centre. After going through all of the contact details available, ultimately, only two were contactable. Both were registered as producing vegetables and one was said to rear pigs. Their names are FS farm and HN farm (see Table 1). In addition, we visited a third farm called HZ farm which we stumbled across and was not on the list.

Table 1: Basic information on the small Chinese farms studied

	Origins	Farming started	Farm area (acres)	Land lease price (USD)	Lease term (year)	Locale	Local employees	Wages cedis/m	Super-market
HN farm	Hunan	2006	5	14,000	99	Accra	1 (guard)	200	No
		2010	2		15	Kumasi	5-6	200	Yes
HZ farm	Guangdong	2005	20	30,000	10	Tema	10 M and 2 F	200-220	No
FS farm	Zhejiang	2009	10	Unknown	10	Tema	7-8, M	300	Yes

When we visited HZ farm, we had not contacted them prior to arrival because it was not on the list of farms we obtained from the Ghana Investment Promotion Centre. The road was rough. We were driving around looking for FS farm and saw this farm and a Chinese person standing in the field. In Ghana, a Chinese face is an enabling 'name card' to start a conversation. We took advantage of this to engage him and soon were sitting down with him to interview.

While we were interviewing we saw a snake and were concerned that there might be more in the field, so we just went to the edge to see what was growing. There was maize, vegetables (carrots, beans, cucumber, onions, leafy green vegetables), free-range chickens for personal consumption and a couple of large construction diggers imported from China (which he explained were his friend's that he was storing for safety). There was also a pile of timber. He explained that he also has other business aside from the farm. His friend was asking him to help with his timber business. The housing was very simple, built by HZ himself on the plot of land he had leased.

Down the road and around the corner from HZ farm lies FS farm. They have better housing than HZ. We found a large yard surrounded by a fence. We stopped the car in the main gate and saw a large building. We shouted asking if anyone was there. A man and woman came out of their building and explained that it was their rest time. They spoke with us for a short period of time and told us there were three or four Chinese staff living on the farm at any one time. The man was a farmer in Zhejiang Province, China before he came here. He was hired because of his knowledge of farming techniques. One year prior to his arrival, they had invited a college student to run the farm but it had not gone well. All staff members work on the farm and there is no clear labour division, but he primarily oversees the farming techniques. They have small machines and a greenhouse. The crops they are growing include chili, cucumber and cabbage. We walked through the fields on our own after the interview, when the man needed to go back to work. The fields were generally better organised than at HZ farm, with better roads and better planning. There were eight workers in the field who called to us in French and said they were from Togo.

Like many migrant farmers in Zambia, as studied by Guo Chatelard (2014), we found that many of the Chinese small-scale farmers in Ghana come from non-agricultural backgrounds. Furthermore, all of the three farm owners were from different provinces in southern China, but only one of them migrated specifically for agriculture. Before setting up his farm, the owner of FS farm had been trading agricultural products between China and Ghana, and the owner of HN farm had been working in Ghana as an engineer in a Chinese company. Only the owner of HZ farm came to Ghana especially to set up a farm. However, his migration history was far more complex than those of others we met. For the past two decades he had been living and farming on the Northern Mariana Islands, a US Commonwealth in the middle of the Pacific Ocean which he moved to during the Cultural Revolution.

Despite their very varied backgrounds, though, all of them have learned about farming, livestock, agricultural management and marketing in remarkably challenging social, linguistic and physical environments. Furthermore, they have also shown a willingness to convert to a new line of business if it proves to be more economically viable. Surprisingly, though, the motivation to start their farms was somewhat similar; all of them said they aimed to meet their own needs for vegetable consumption in the first instance. As one respondent put it, 'the boss of FS farm is about 60 years old. He was running a trade business in agricultural products between China and Ghana four years ago. Later on when he found it difficult to find Chinese vegetables in the local market, though, he started the first farm in 2010.' For these smallholder Chinese farms, vegetable production is a better investment than rice production because of the short-term profit returns, lower costs of production and ease of management.

All three Chinese farms were between 1.2 and 6ha in size and all of them were set up in the past ten years. In order to successfully run these small farms, the farmers had to consider the following elements: land, water resources, access to markets and labour.

Land

Firstly, in all three farms we studied, land is one of the key considerations. According to the respondents, in Ghana it is permitted to transfer leasehold interests to non-citizens for a maximum of 50 years. In spite of this, the Chinese farmers had great difficulties securing the land area and quality they wanted within a legal framework. Part of the problem is that in Ghana, there are ongoing land conflicts between local chiefs and local government. This is a major hindrance for the Chinese to invest in agricultural activities in Africa, because it is not always clear who owns the land rights. Thus a lot of time and effort has to be invested in understanding the background of any land so as to avoid being entangled with local conflicts and having to pay for the same land twice. The owner of HZ found his land by driving around areas that he liked and speaking to the relevant

authorities. In the case of FS farm, they were introduced to their plot through local networks.

Access to markets

Secondly, to run a farming business successfully, they have to be able to maintain a manageable output and have access to local markets. Given that most of their customers are Chinese communities based in the big cities such as Accra, Tema and Kumasi, Chinese farms are generally in the peri-urban areas of these cities. That said, ease of transportation and road conditions to get to the Chinese localities are equally important considerations.

Aside from direct sale to company consumers, there were also two cases we found of migrants running supermarkets and farms together. This effectively formed a vertical integration between Chinese run farms and stores. In all, the owner of FS farm has three farms of about 10ha each and four supermarkets, in Tema, Accra, Kumasi and Tangla. So each farm is connected with one supermarket for vegetable supply, with the exception of Tema and Accra, where one farm is linked with two supermarkets. Supermarkets play an important role in the sale of vegetables and they help farmers develop further networks within the Chinese community; however, these relations are not always so straightforward. For example, in Kumasi, Chinese supermarkets are concentrated in one area. Yet in spite of the close proximity, the owners of these supermarkets do not interact frequently for business or personal communications amongst themselves. Rather, they mostly attract Chinese migrants from their home regions.

Water

Thirdly, all farms have to ensure stable access to water. As HZ said, 'it is convenient to irrigate when we choose land nearby the river and this can save money because in Ghana it is free to take water from the river.' Irrigation is indispensable for a farm and in terms of the distance between the river and the fields, the shorter the better.

Labour

Finally, labour is a crucial factor for all farming operations. Workers are recruited locally, both male and female. It is predominantly male labourers that are recruited for farm work, and in HZ farm, two female Ghanaian workers were specially hired for weeding. The farm managers believed that the reason why the Ghanaian chose to work for them was not because of the high wages but because of the timely payment of wages. At times local workers also requested (and were given) pre-paid wages from their Chinese farm managers to meet urgent social needs.

Generally labourers work in the cooler mornings from 6:00 to 11:00 a.m. and then again from 3:00 to 6:00 p.m. The payment is done monthly or every half month. Some

of the workers are living on the farm to save travel expenses; one worker at HZ farm said his hometown is 80km away from the farm, which would cost 12 cedis for him to travel one way.¹ He is satisfied with the job, and does not find it too tiring or difficult. While working on the farm he has also accumulated some savings which he plans to use to open a small shop in the future.

The Chinese farmers seldom have contacts with the Chinese embassy or other officials from China. Mostly they engage with Chinese migrants from their home regions (老乡). Although China seeks to encourage and facilitate Chinese enterprises 'going out' and provides funding for projects within Africa through the China-Africa Development Fund, it's not evident that the interviewed small-sized farms have received any support from the Chinese government as yet. All three of the farms are managed by men and based on family networks. They have a clear division of labour among themselves, but compared with bureaucratic or employer-employee models, the arrangement is rather flexible. HZ farm only has three Chinese nationals at management level: a couple and the wife's brother-in-law. To hire family members is a common practice among Chinese communities in Africa that want to help their relations. They may also be seen as a more reliable workforce. In FS farm, for example, there are more than 20 family members working across the four different locations, including both supermarkets and farms in Tema, Accra, Kumasi and Tangla.

Chinese encountering Ghanaian agriculture

As discussed above, all of the farmers we interviewed were not actually farmers prior to moving to Ghana. They approached the Ghanaian agrarian landscape through a mixture of their own ambitions to bring a taste of home to this new land, and a sense of opportunity in what they viewed to be a land of abundance and a clear market gap. One informant, Mr. Mo, stated, 'Ghana has very nice climate and soil condition, whatever you plant, you can harvest.'

In Chinese eyes, Africa is a fertile land for agriculture, and Ghana is viewed as a politically stable option within the continent. Furthermore, Chinese migrants to the country have increased in the last 60 years to work in a whole range of sectors, thereby stimulating greater demand in the local Chinese food market. Since the 1960s, a lot of Chinese have come to Ghana for mining, which reached its peak by the summer of 2010: it was estimated by our respondents that in Kumasi alone there were 50,000 Chinese by that time. Most of the Chinese migrant population is engaged in mining, fishery, timber and construction industries, particularly with the Zhongjian and Huanshan International construction companies. Most of these migrants settle in and around the major cities of Accra, Tema and Kumasi for the convenience of transport and business networks, as well

as the social networks and quality of life. However, Chinese migrants found there to be a very limited variety of the vegetables they are familiar with. In Ghana, the main local crops are cassava, yam, cocoyam and plantain and these constitute the main foods for locals. As the Chinese community grew, some spotted this as an opportunity and set up small-sized agricultural companies to grow vegetables for the niche Chinese market.

It was discussed earlier that some of the small-scale farmers we interviewed were engaged in other business activities prior to working in agriculture. Many of them also had no prior farming experience in China. The farmer in charge of HN farm is a young man and his father first came across to work for a mining company. After a few years, the father brought over several family members to start farming with him in 2006. This was primarily aimed at selling to other miners and construction workers, and his farm included pigs, fish and ducks. By contrast, the boss of FS farm had been trading agricultural goods between China and Ghana for the past 20 years before moving into farming himself. Lastly, HZ was the only exception who, as mentioned earlier, had built up farming experience in the Mariana Islands. There he learned how to use drip and spray irrigation technologies from local farmers before he arrived in Ghana.

Generally speaking, though, the Chinese farmers we interviewed learned their agricultural practices through a process of trial and error. Said HZ,

Once we grasp how to use the appropriate planting technologies, such as fertiliser application in the vegetative period, we can easily grow and harvest. We cannot buy this technical knowledge. It has to be gotten ourselves by trial and error. Sometimes the local technicians also cheat us by selling technologies which don't work, and then they leave.

The farmer on FS farm agreed with this, saying, 'we can only learn from practical experience'. In fact, they said there were many Chinese migrants who had come to Ghana specifically to try their hand at farming, but failed and left, supposedly due to being cheated with land conflicts or technology barriers. HZ told us, 'the former owner of my land invested one million Chinese RMB but failed because of a lack of agricultural technologies, and he is among the few who stayed and persisted. It is only recently that their efforts have paid off. We were told that many gave up after one or two years, largely due to the unfamiliar climate and local conditions.'

Although in the beginning, the farms encountered a lot of difficulties, those who stayed and persisted in earlier years survived due to a sizeable Chinese community that provided a ready market. However, due to the expulsion of a large number of Chinese gold miners in June 2013, the farms lost a significant portion of their market. The remaining Chinese farmers confirmed they have been

selling less than before and consequently they are struggling. These market factors will be discussed in more detail later in this paper.

Perseverance in the face of hardship

Chinese farmers still face huge challenges in adapting to the local environment, as well as understanding how to deal with social institutions and culture. Due to a limited availability of land, machinery and agrochemicals in Ghana, these farmers practice labour-intensive farming and use organic manure with few pesticides or herbicides.

Firstly, as one farmer puts it, agriculture is a 'localised art' (Mendras 2005: 39), which is practiced differently according to a variety of factors around the world. Heavy rainstorms followed by strong sun exposure are a major difficulty that these newly arrived farmers in Ghana have had to contend with, which is particularly problematic for growing vegetables (as most of them do). In the beginning, HN Farm failed to harvest anything when they tried to plant Chinese watermelon and other green vegetables because of heavy rainstorms and a blazing sun that killed everything. The failure taught the farmers a lot of what is possible and realistic, and how to adapt to these circumstances in the future. They also sought local farmers' recommendations and began to use the local methods such as placing palm leaves over their crops to lessen the intensity of the sun's glare.

Secondly, the growing of Chinese vegetables is obviously dependent on getting Chinese seeds in the first place. No Chinese seeds are available from local markets, so most have to acquire vegetable seeds from China when they or their close associates travel back to that country. The vegetable varieties include pumpkin, pepper, Chinese cabbage, cucumber, beans and cauliflower. Yet another problem is that they cannot reserve seeds for the next crop, which means they need to return home annually. This sort of delay also poses problems if they need to change crops frequently according to market conditions. One exception is HZ farm, which has succeeded in growing vegetable seeds, albeit on a small scale. This is due to HZ's previous experience of living in rural areas. However, he said he would not share this successful experience with other Chinese farmers in Ghana since 'competitors are enemies!'

Thirdly, a number of the pests that blight their crops have developed a resistance to pesticides, meaning that farmers have to change their pesticides frequently. Two of the farms also use herbicides, whereas in HZ farm weeds are removed manually. In addition, compound fertiliser (NPK 15-15-15) is used as well, combined with cattle and chicken manure bought from the market to enhance the soil fertility. Lastly, in order to deal with their unstable and decreasing market, the farmers have had to time their growing practices appropriately. This

involves crop rotations, leaving fields fallow, intercropping, etc.

Ultimately, the Chinese farmers originally envisioned a land of abundance and easy farming opportunities in Ghana. However, what they encountered was an environment with many challenges, and the realities of agricultural production there required constant flexibility, adaptability and 'making do'. In contrast to the official rhetoric on China-Africa agricultural engagement, which focuses on China's modernised agriculture sector, advanced techniques and mechanised large-scale farming practices, these techniques applied by Chinese small farmers are similar to smallholder farming techniques in China. They primarily consist of organic manure for fertiliser, manual labour and a greater reliance on natural resources than on modern mechanised machinery and technology.

Squeezed in the margins: Chinese farmers in a new and competitive market

When we visited the JH supermarket, linked with FS farm, there were few vegetables left on the shelves, the staff were watching TV and from time to time some Chinese consumers came in. Most of the customers were from south China but there were others from East Asia such as Koreans. The goods in the supermarket are diversified and include food and other daily household needs. Most of the products are from China, with only a few from other countries, such as rice from Thailand.

Chinese farmers produce fresh vegetables aimed primarily at the local expatriate market, due to the lack of Chinese vegetables available locally. The farms that we observed appeared to do this through two main channels: one is dependent on personal networks and the other one is by vertically integrating their businesses.

All of the interviewees expressed the difficulties of finding clients at the outset as unforgettable. One described his process as the 'stupid way', whereby HZ rented a pickup truck and drove around the centre of Accra looking for Chinese people on the street and handing them business cards. This actually got them off to a good start. They also tried to market their produce to locals, but 'even when we gave cucumbers to the locals for free, they weren't interested in trying them'. As their networks expanded over time, the Chinese farmers began to receive orders for their vegetables from companies.

By contrast, FS and HN farms are examples of vertically integrated businesses which mainly sell the produce they grow in their own supermarkets. Beyond just the vegetables they produced, the shops also imported essential goods and certain specialist cooking ingredients from China. Their targeted consumers are Chinese, Indians and Koreans. In contrast with HZ farm, this system

allowed these Chinese farmers to target consumers more broadly, without the problem of language barriers or social networks, thereby allowing them to expand beyond Chinese communities to other Asian groups. Furthermore, their accessibility in the centre of town meant that in 2007/08 when there were a lot of Chinese companies, for example, HN farm was able to sell 120 pigs (as pork) and several hundred kilograms of vegetables per month. In this way, food production became an arena for Chinese expatriates to connect with each other and strengthen the bonds among the diaspora community.

Living in competition: struggling for a niche market

It is difficult for Chinese smallholder farms to survive in Africa. On the one hand, the farmers need to adapt to the local climate, and on the other hand, they need to

compete in the market, both amongst themselves and with Ghanaian farmers. This greatly tests the farmers' business acumen, patience and resilience.

Limited Chinese consumers

Given the fact that Ghanaian consumers do not buy Chinese vegetables and pork due to their dietary habits, Chinese farms can only target Chinese consumers. Yet Chinese consumers have more options. In Ghana, there are many markets for Chinese migrants to buy vegetables, including local supermarkets, Chinese supermarkets, the local open market and local farms. Generally speaking Chinese migrants prioritise the purchase of vegetables. In this respect their first choice tends to be local Ghanaian farms, followed by local supermarkets, then local open markets. Chinese supermarkets and farms tend to be their lowest preference due to the different advantages and disadvantages from a consumers' perspective, as shown in Table 2.

	What to buy	Advantages	Disadvantages
Local farm	Chinese cabbage, radish, cauliflower, garlic	Lower price, fresh, close distance, diversified varieties	Limited choices
Local open market	Garlic, oilseed rape, chicken, beef, mutton, fish	Lower price	Limited choices
Local supermarket	Potatoes, cooking seasonings like ginger and garlic	More choices	Expensive
Chinese supermarket / farm	Cooking seasonings like ginger, pork, leaf vegetables, cauliflower, beans, tomato, cucumber, chili, potato, onion, garlic, carrot	Unique provider with some vegetables; together sold with other Chinese products for daily life	Limited choices, higher prices

Data source: Interviews with consumers during fieldwork.

We found that distance and price are the two key considerations for Chinese consumers. When asked why they did not choose a Chinese supermarket as the first option one respondent told us, 'not all of the vegetables in the [Chinese] supermarket are from the Chinese farms, thus it's not valuable to buy the same things here with higher prices. As we know, the cauliflower, beans, tomato and leaf vegetables are from the Chinese farm, but the carrots are from a local Ghanaian wholesale market, and the potato, onion, ginger and garlic are all imported from China.' Given the same vegetables, they preferred the cheaper option. Therefore, they always regard local Ghanaian markets as the first option and Chinese supermarkets as the last. Another Chinese interviewee told us,

As long as we can find Chinese vegetables at local open markets, we buy them there because they are cheaper; sometimes they are even half the price than at the Chinese supermarket. For instance, one cauliflower is 1-2 cedis at local market, but in the Chinese supermarket it is 4 cedis. Now we can even

find leeks, celery and other vegetables at the local open market, unlike some years back.

Furthermore, another challenge for the Chinese farmers is that not all of the Chinese who live in Ghana buy their vegetables in the market. Some big companies such as China Geo and Sinohydro have their own small farms and pig rearing farms. This makes the market for Chinese farmers even smaller, as these companies represent a sizeable Chinese community. Under such circumstances, Chinese farms have to change the varieties and quantities of vegetables they produce to respond and appeal to customers.

Competition among Chinese producers

Nowadays, in the wake of so many Chinese miners leaving Ghana, the vegetable market has become much smaller and profits have declined. The situation is more competitive than cooperative between Chinese farmers, and in order to survive they are depending on each acting as their own teacher, each having their own tricks, each

having their way of dealing', in HZ's words. During our visit in Kumasi, two Chinese supermarkets showed completely different faces to us. Whereas the boss of HN supermarket was very open to meeting us and talking, the employee at FS was the complete opposite, despite having told him that we'd already met their contacts in Accra. They were also both situated just three minutes' walk from each other. The owner of HN farm told us,

When we first arrived here, Chinese people were friendly to each other and helped each other. In total there were about 7,000 Chinese in Ghana, but now it is 75,000² more or less and Chinese people don't help each other much anymore.

This hostile and suspicious attitude even ran through their farm that we visited. Clearly afraid of divulging 'trade secrets' to competitors, the Chinese farm managers were reticent to share information with us.

Competition with Ghanaian farmers entering the new market

Based on our interviews, we found that Ghanaians rarely consume Chinese vegetables³ due to the different dietary habits. This is especially the case with the more unique Chinese vegetables, such as bitter melon (苦瓜) and edible amaranth (苋菜). However, a growing number of local Ghanaian farmers have started to plant Chinese vegetables, and are succeeding in selling them on the local market. This represents additional market competition for the Chinese producers. When we visited a local market we found it had over 20 varieties of vegetables available, many of which would be popular with Chinese customers such as tomato, chili, pepper, bean, carrot, cabbage, cauliflower, pumpkin, cucumber, potato, onion and spring onion. The local Ghanaian supermarkets buy their vegetables from the local wholesale market or farms, and they never buy from Chinese farmers. In other words, Chinese farms cannot sell their produce through local markets and make profits.

However, although we found Chinese vegetable varieties at local Ghanaian farms and in open markets, we couldn't find any local Ghanaian varieties on Chinese farms. HZ told us that in his case,

We don't sell Ghanaian vegetables. Firstly because they have lower purchasing power. And secondly, we don't want to compete with local farmers.... But when Ghanaians buy our vegetables, we are very happy. For instance, local people like to buy eggplant, potato and cabbage from Chinese farms or supermarkets which they use for fufu dishes. However, they are not used to the taste of Chinese vegetables like carrots and beans.

JH supermarket manager Ye also confirmed this: 'We never plant Ghanaian seeds because Chinese people

don't eat the Ghanaian vegetables like cucumber because of the taste.... We are only farming for the Chinese market.'

In addition, there are more and more Ghanaian farmers who have started to grow vegetables aimed at the Chinese expatriate community. We visited one local farmer and he explained to us how he built connections with the Chinese consumers.

There are Chinese who came and gave me seeds, and asked me to plant for them. After harvest, I will call them to collect especially coriander and ginger. Because the Chinese cannot take away all of the vegetables, there is some left over for me to sell through other ways and earn a profit.

In fact, this farmer has been engaged in full-time farming for 23 years. Generally he planted onions and peppers because of the high economic returns, while at the same time he has planted Chinese vegetables for ten years for different groups, including one Chinese cook in a restaurant and people from Chinese companies.

To understand why Chinese small farms have to sell their products at higher prices, it is useful to calculate the differences in farming costs between Chinese farmers and local ones. On the whole, compared with their local competitors, Chinese small farms pay higher costs for two main reasons. Firstly, the Chinese need to rent their land at a higher price, whereas Ghanaian farmers either work their own land contracted from the government or land that is obtained from landholders through sharecropping agreements. Secondly, Chinese farmers on average pay higher wages so as to attract a stable local workforce, and also have to cover their transport costs back to China to buy seeds.

Conclusion

Chinese farmers imagined that in Africa the land would be expansive, the soil fertile, and that they would be assured of instant success in farming. As more and more Chinese migrated to Africa as part of China's 'going out' strategy, Chinese nationals who had come to Africa earlier realised there the strong market potential for vegetables to meet the unique consumption needs of the increasing migrant population. Our survey found that Chinese private individuals started to invest in the agriculture sector for vegetable production to meet the consumption needs of the niche market presented by the Chinese migrant community. Under limited conditions, Chinese small farmers faced many challenges. It's important to understand the significance of their perseverance squeezing in at the margins. Despite considerable hardship in a limited market and foreign terrain, these farmers persevere, producing a new kind of market outside of the constraints of modern day China. Due to their unique background, Chinese farmers cannot extend their marketing beyond the Chinese community, nor can they compete with local Ghanaian farmers. However, it

is clear that food production has become an arena for Chinese expatriates to connect with each other and strengthen the bonds among the diaspora community, despite the competition that exists between them.

Furthermore, while stories of Chinese 'neo-colonialism' and 'land grabs' have dominated a lot of media analyses of Chinese engagements in African agriculture (Bräutigam 2009), our research findings paint a very different story. Only once did we come across a Chinese company bidding for part of a large scale plot of land in Ghana. This was a construction company bidding for a plot in the north to develop rice production for the local market, but they were as yet unsuccessful at the time of research. By contrast, this was the real story of Chinese 'land grabs' in Ghana: plots that ranged between 2ha and 6ha producing vegetables to sell locally.

Furthermore, the official Chinese rhetoric on China-Africa agricultural engagement often focuses on China's modernised agriculture sector, advanced techniques and mechanised large-scale farming practices with the support of the government. By contrast, the practices of these small farmers are quite different, aiming to simply meet the small demands of other Chinese migrants and turn a profit. Quite clearly there is no real prospect for these farms to become large-scale, highly mechanised or capital intensive, as most African governments yearn for to increase production. Yet this is an important portion of the real story of Chinese agricultural engagements in Africa.

References

- i China Agricultural University
 - ii Institute of Development Studies
- 1 At the time of the fieldwork, the exchange rate was US\$1=2.2 cedis and the average monthly wage for general hands was 150-200 cedis.

- 2 The number is an estimate by the respondent only, which might not be correct yet could be understood to show the sharply reduced trend of Chinese migrants in Ghana.
- 3 Here and in the following sections, 'Chinese vegetables' refers to two varieties. One is those vegetables that look the same as local types but taste different, including cucumber and tomato; the other kind is those only Chinese eat, such as some leaf vegetables and bitter melon.

References

- Bräutigam, D. (2009) *The Dragon's Gift: The Real Story of China in Africa*, Oxford, UK: Oxford University Press
- Guo Chatelard, S. (2014) 'Chinese Agricultural Investments in Zambia', *GREAT Insights*, 3(4), April 2014
- Liu S. (2014) 'Perceptions of Ghanaians on China and the Chinese', in Li A. et al. (eds), *Annual Review of African Studies in China (2013)*, Beijing, China: Social Sciences Academic Press (刘少楠, 加纳人对中国和中国人的认知, 摘自: 李安山主编《中国非洲研究评论(2013)》, 北京: 社会科学文献出版社。)
- Marfaing, L. and Thiel, A. (2011) *Chinese Commodity Imports in Ghana and Senegal: Demystifying Chinese Business Strength in Urban West Africa*. Working Paper 180, Hamburg, Germany: German Institute of Global and Area Studies
- Mendras, H. (2005) *The End of Farmers [La Fin des Paysans]*, Chinese edition translated by Li Peilin, Beijing, China: Social Science Publishing House
- Mohan, G., Lampert, B., Tan-Mullins, M. and Chang, D. (2014) *Chinese Migrants and African's Development: New Imperialists or Agents of Change?*, London, UK: Zed Books

Annex 1: Information of interviewees				
No.	Interviewee	Nationality	Affiliation	Date
1	Mr. Gao Wenzhi, Chancellor	CN	The Economic & Commercial Counsellor's Office, Chinese Embassy	2nd Dec 2013
2	Mr. Niu Tao, secretary	CN	The Economic & Commercial Counsellor's Office, Chinese Embassy	2nd Dec 2013
3	Mr. Fengnian	CN	Chief manager of China Geo in Accra, Ghana	2nd Dec 2013
4	Ms. Ye Xian	CN	Five Continents Agro-chemical company, Accra	2nd Dec 2013
5	Mr. David	GH	Waitor in Resturant Huangshanghuang	2nd Dec 2013
6	Mr. Huangzhong	CN	Huangzhong Farm	3rd Dec 2013
7	Mr. Ye Jiandong	CN	Fengshou Supermarket	3rd Dec 2013
8	Mr. Rao Huaming	CN	Wynca Sunshine Chemical Company, Ghana	4th Dec 2013
9	Ms. Ma Yuhua	CN	Wynca Sunshine Chemical Company, Ghana	4th Dec 2013
10	Ms. Gertrude Selawoka, secretary	GH	Wynca Sunshie Chemical Company, Ghana	4th Dec 2013
11	Ms. Naa Kotei Hammond	GH	Irrigation Management Committee	5th Dec 2013
12	Mr. Nii Ofori Hanson	GH	Irrigation Management Committee	5th Dec 2013
13	Mr. Uncle George, farmer	GH	Local farmer on the field of Irrigation Project above	5th Dec 2013
14	Mr. Fengnian	CN	Chief manager of China Geo in Accra, Ghana	9th Dec 2013
15	Mr. Maurice Ebereonye, sales executive	GH	DIZENGOFF, DWA	10th Dec 2013
16	Mr. Afari Akoto-Mintah	GH	Irrigation Committee, Ministry of Agriculture and Food	11th Dec 2013
17	Mr. Ahmed Abukari, farmer	GH	Ghanaian Farm	12th Dec 2013
18	Mr. Ye Jiandong	CN	Fengshou Supermarket	14th Dec 2013
19	Mr. Mo Dating	CN	Chinese Resturant	17th Dec 2013
20	Mr. Feng Yi	CN	Hunan Supermarket, who owns Hunan farm	18th Dec 2013
21	Mr. Yu Ping	CN	Five Continents Agro-chemical company, Kumasi	18th Dec 2013
22	Mr. Yang Shikun	CN	Project manager of China Geo in Kumasi, Ghana	19th Dec 2013

This **Working Paper** was written by **Lu Jixia, Yu Lerong** and **Henry Tugendhat** for the **Future Agricultures Consortium**. The FAC Working Paper series publishes work in progress by FAC members. All papers are technical research papers which have been peer reviewed, and are available in open access format. The series editor is **Paul Cox**. Further information about this series of Working Papers at: www.future-agricultures.org

The Future Agricultures Consortium aims to encourage critical debate and policy dialogue on the future of agriculture in Africa. The Consortium is a partnership between research-based organisations across Africa and in the UK. Future Agricultures Consortium Secretariat at the University of Sussex, Brighton BN1 9RE UK T +44 (0) 1273 915670 E info@future-agricultures.org

Readers are encouraged to quote or reproduce material from Future Agricultures Briefings in their own publications. In return, the Future Agricultures Consortium requests due acknowledgement and a copy of the publication.



FAC appreciates the support of the UK Economic and Social Research Council and UK Department for International Development (DfID)



The views expressed do not necessarily reflect the UK Government's official policies.