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China-Cameroon Agricultural Cooperation: Challenges of Agricultural Development in Cameroon

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Abstract

Agricultural cooperation between China and Cameroon is a capital-generating avenue where each partner develops winning strategies to make the best of the opportunities present in this field. This perception has fueled controversial debates about the potential of Chinese agricultural investments in Africa, thereby questioning their ability to boost agricultural development in Africa.

This article aims to investigate the impact of agricultural cooperation between China and Cameroon, in particular, on transferring agricultural technologies to the local population. Based on in-depth fieldwork, qualitative data was collected in the locality of Nanga-Eboko and Yabassi in Cameroon. 22 interviews involving several categories of actors were carried out. The results revealed that China's investments in the agricultural sector in Cameroon contribute relatively to the transfer of agricultural technologies to the local population. However, Chinese interventions are subject to strong criticism specifically tied to the massive acquisition of agricultural land by China in Cameroon and the non-involvement of local populations in the development and implementation of projects. Hence, there is a need to rethink this relationship by placing the local population at the centre of action strategies.

Keywords: Agricultural cooperation, Investments, China, Cameroon, Impact, Technology transfer, Local population.

1. Introduction

Agriculture plays a leading role in the Cameroonian economy (Touna, 2008; MINEPAT, 2020). It employs over 60% of the working population, mainly in family farms. (NIS, 2019). As a result, agriculture has become a key sector of Sino-Cameroonian cooperation. From a single project in 1991, China's interventions in the agricultural sector in Cameroon have grown to ten projects (see figure 1).

These projects have been reinforced following the third China-Africa Cooperation Forum (FOCAC) held in 2006 in Beijing (FOCAC, 2006). This forum paved the way for massive Chinese interventions in Cameroon as evidenced by the establishment of the Agricultural technologies Demonstration Center (ATDC) in Nanga-Eboko and the Technical Professional Agricultural Higher School (TPAHS) in Yabassi. These projects marked particularly, the Chinese presence in the agricultural sector in Cameroon, both by their consistent budget

estimated at over 60 billion CFAF (Gabas, Xiaoyang, Wang, Anseeuw, Fraser and Ribier, 2014) and by the accompanying media coverage. Some sources even claim that the ATDCs have become the emblem of Chinese presence in Africa (Gabas and Ribier, 2015), given that they allow China to assert its power not only in the agricultural sector but also in the scientific and technical fields.

Despite the execution of all these projects and Chinese technoagricultural knowledge, agricultural cooperation between China and Cameroon is subject to multiple challenges. Therefore, this article aims to analyse the impact of China's agricultural investments in Cameroon. It specifically seeks to establish whether China's investments in the agricultural sector in Cameroon contribute to transferring agricultural technologies to the local Cameroonian population; the limitations of China-Cameroon agricultural cooperation and the potential measures to stem these limits. To address these concerns, the analysis is based on primary data from monographic materials compiled from field surveys and secondary data consisting primarily of documentary research. Essentially, this work is structured as follows: it first builds a literature review, followed by a theoretical framework that guides the analysis of the Sino-Cameroon agricultural cooperation. Then, it presents the data collection methodology on the one hand, and the analysis of China's intervention methods in the agricultural sector and their impact on the local population in Cameroon on the other hand. Based on the above, recommendations shall be made.

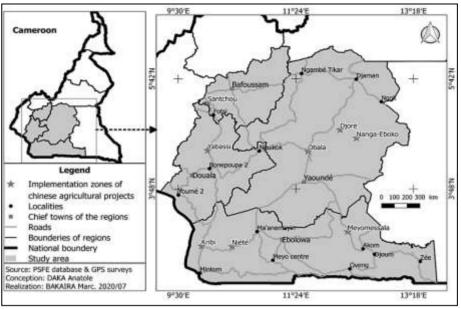


Figure 1. Location map of major Chinese agricultural projects in Cameroon.

2. Literature Review

The proliferation of China's agricultural investments in Africa since the 2006 FOCAC has not only raised many hopes and fantasies in the African community (technology transfer) but also fears (land grabbing). The related scientific literature, though enriched every day, is increasingly less available in the specific case of Cameroon.

Sergio Chichava's (2014) analyses reveal that China's agricultural investments in Africa divide public opinion. While some civil society actors see these investments as a "land grab" which therefore cannot improve the living conditions of the local population, supporters see them as a resource likely to boost agricultural growth and development in Africa (Chichava, 2014). According to this author, it is urgent to examine whether China's prominent actions in the agricultural sector in Africa "constitutes a new development paradigm more suited to African needs or a disguise for a new form of imperialism" (Amanor and Chichava, 2016). Numerous articles, blogs, and news denouncing China's imperialist designs on African farmlands have been produced (Horta, 2007; French TFI News, 2008; GRAIN, 2008; Hou, 2011). The reports of these publications are based on China's land grabbing in Africa for offshore food production.

Unlike the abovementioned authors whose publications focus on land grabbing, Brautigam and Zhang (2013) note that Chinese companies have played a less important role in the recent rush to acquire agricultural land in Africa intended for the production of food for African consumption (Bräutigam, 1998; Brautigam, 2015).

However, Gabas and Tang (2014) believe that the lack of credible information on the growth of China's investments in the agricultural sector in Africa has fueled a lot of rumours and misconceptions. For some, these investments have multiplied by 12 since the year 2000 (Gabas and Tang, 2014). Others, however, point out that "overall, Chinese agricultural investment abroad represented only 1 to 2% of total Chinese investment abroad, during the years of rapid growth from 2010 to 2016" (Ecofin, 2020). Despite this opacity, Xavier Aurégan (2017a) states that "China [...] brings an experience different from that of traditional partners". This experience is likely to "create opportunities" in the African agricultural landscape (Qi, Alemu, Cook and Li, 2015). According to Tugendahat and Alemu (2016), one of these opportunities is the transfer of skills through the training of agricultural personnel.

Nevertheless, For Serge Michel and Michel Beuret (2008), China owes its breakthrough in the African agricultural space, traditionally recognised as "overseas or European territories", to its success and, to a greater extent, to the failure of the European partnership policies forged with Africa since independence (and even a little earlier). Thus, in this register, the development of agriculture would express the "portfolio policy" of the People's Republic of China, the main objective of which is to position itself in the distribution of African energy resources (Aboville and Sun, 2010).

For Cameroon in particular, scientific work dealing with the Chinese presence in the agricultural sector is rare. In 2009, Deborah Brautigam analysed the challenges of agricultural cooperation between China and Cameroon. She argues that despite the ever-increasing evolution of the Sino-Cameroonian agricultural partnership, Cameroon is not a breadbasket for China because China exports more food products to Cameroon than it recovers from this country as a source of supply (Bräutigam and Xiaoyang, 2009; Bräutigam and Zhang, 2013). However, Hou (2011) notes that the acquisition of land by China in Cameroon raises concerns and reveals many obstacles to the success of agricultural investments. It exacerbates tensions between local civil society organisations, the Cameroonian government, and Chinese investors.

Sofack(2018) further reveals that China uses agriculture as an instrument for its geostrategic positioning in Cameroon.

Therefore, the main objective of this article is to contribute to the existing literature and build on the issues raised in the previous paragraphs. More specifically, this paper aims to contribute to the scant evidence of the impact of China's investments in the agricultural sector in Cameroon, specifically the transfer of agricultural technologies to local populations.

3. Theoretical Framework

Two main theories were used to conduct this research: *strategic analysis* and *structural or genetic constructivism*. Strategic analysis suggests a study of the strategies adopted by the various actors involved to determine the motivation for their actions. *Structural constructivism* probes the "*practical logics*" that underpin the struggle for the appropriation of specific resources and different forms of capital in a field.

Michel Crozier, the founder of strategic analysis, posits that an actor always develops a strategic behaviour that must be understood from the relationship games that he is involved. To this end, it is important to seek to discover the rational dimension of his strategy.

Applying this notion to the Sino-Cameroonian agricultural cooperation makes it possible to grasp the underlying motivations of each actor. To achieve their goals, these states adopt strategies to circumvent current decisions to be heard or to seize opportunities other than those provided for in cooperation agreements.

To maintain its position of superiority within this agricultural cooperation, China develops strategies that make Cameroon ever more its dependant for the survival of the projects implemented. The mastery of knowledge and areas of uncertainty in a given social system creates opportunities (Bréchon, 1999).

China's non-involvement of the local population when developing and implementing projects appears to be a strategic behaviour adopted by the actor of the system (China) to satisfy its interests (Crozier and Friedberg, 2014).

Finally, this theory highlights the many flaws that handicap the functioning of Sino-Cameroonian agricultural cooperation: it is "the theory of bureaucratic dysfunctions" of which Crozier speaks(Crozier and Friedberg, 2014). However, to shed light on the strategies and power struggles

involved in implementing Chinese agricultural projects and to understand the logic of the social dynamics driven, it will be useful to have recourse to structural constructivism.

Structural constructivism, initiated by Pierre Bourdieu, is a sociological theory that analyses the "practical logics" in which the symbolic systems work. This theory attempts to transcend the classical opposition between subjectivism and objectivism and conceives society as the fruit of permanent social construction. The major concepts of Bourdieu's theory are those of habitus, field, capital, and symbolic violence (Bourdieu, 2002). The notion of field is understood as a space where "the people who are involved (...) have in common a certain number of fundamental interests, namely everything that is linked to the very existence of the field: hence, an objective complicity which underlies all antagonisms" (Bourdieu, 2002).

In this article, Sino-Cameroon agricultural cooperation takes on the characteristics of a field in the Bourdieu sense of the term in that the agents interact for specific interests. Because of the means involved (financing of projects and transfer of technology for one and natural resources to be exploited for the other ...), the Sino-Cameroonian agricultural cooperation becomes a space where the different actors contend to preserve their interests. A practical sense drives each actor, enabling him to assess his chances of success in this field according to the capital he has.

In the light of Bourdieu's approach, we observe that the Sino-Cameroon agricultural cooperation is highly politicised and sealed by the quest for capital. Hence, the vast pool of raw materials available in Cameroon attracts the greed of China, urged by her desire to satisfy the bulimic demands of its industries. Sino-Cameroon agricultural cooperation is therefore a crossroad of the given and the received where each party struggles to seize the greater advantage.

The strategic analysis of Michel Crozier and the structuralist constructivism of Pierre Bourdieu allow us to shed light respectively on Sino-Cameroonian agricultural cooperation as a system of concrete actions whose actors, by seizing the room for manoeuvre left by this system, develop strategies to satisfy their interests and, to conceive this cooperation as a field of struggle in which the actors confront each other according to the relative stakes. The capital at his disposal largely conditions the position of an actor in a space of confrontation and his victory.

4. Methodology

There are several areas China's agricultural projects in Cameroon were implemented, (Figure 1) notably are Nanga-Eboko and Yabassi respectively in the Centre and Littoral Regions which are the most important. These localities were chosen as case studies to examine the impact of China's agricultural projects in Cameroon, specifically the transfer of agricultural technologies to the local population. To achieve this goal, our study adopted a qualitative approach with quantifications. Thus, this study conducted structured and semi-structured interviews, group discussions, ethnographic observation, and documentary research. To deepen knowledge on the topic, this analysis was primarily fueled by discursive and non-discursive data drawn up from field surveys and observations. 22 interviews involving several categories of actors were conducted. Almost 85% of our respondents were male heads of households between the ages of 25 and 65. Site visits for methodical observations made during the survey period from January 2020 to June 2021 provided an understanding of the physical framework of these Chinese agricultural projects. The criteria for the selection of our informants are related to the profession (farmers, agricultural employees mostly) and seniority in the environment (indigenous/non-native).

A set of secondary data compiled from documentary research was also used. Thus, books, economic reports, specialised journals, reports from the Ministry of the Economy, Planning and Regional Development, the investing company, the specifications of ATDC, and the archives of the Ministry of Agriculture and Local Development (MINADER), were consulted. To work around overlapping inconsistencies, the secondary data collected was compiled, rechecked and analysed.

Tableau 1. Overview of the demographic profile of the Interviewees

Category	Variable	Number	
Gender	Male	18	
	Female	4	
Age	25 to 45 years	15	
	46 to 65 years	7	
Education	Nursery	6	
	Primary	11	
	College	5	
Marital Status	Married	14	

	Single	8	
Place of residence	Nanga-Eboko	17	
	Yabassi	5	

Source: Field investigation (made by the authors)

5. The modalities of China's intervention in the agricultural sector in Cameroon

China's intervention includes all Foreign Direct Investments and development aid. These interventions cover decentralised cooperation, technical assistance, and debt relief. They operate in three forms: grants, interest-free loans, and concessional loans (Aurégan, 2017b).

Three key factors justify China's renewed interest in agricultural projects in Africa. First, China's commitment to agriculture in Africa was initially an instrument of diplomatic competition to thwart Taiwan's actions on the continent. Almost all agricultural farms established by Taiwan in the early 1960s were later taken over by China. Then, this counter-attack process accelerated after 1971, when China was admitted to the UN Security Council by a majority vote of African member states. Second, China's interest in the African continent was motivated by her need to guarantee its food security. (Alden, 2013), (Siu and McGovern, 2017). Finally, the decrease in the volume of agricultural aid from traditional donors to African agriculture during the period of Structural Adjustment (1990) consolidated China's commitment to agricultural investments in Africa (Bräutigam and Xiaoyang, 2009).

5.1. From the popularisation of modern farming techniques to the training of agricultural staff

In the 1990s, the implementation of the Structural Adjustment Policy (SAP) marked by the withdrawal of the state from the production sector, coupled with the privatisation of public enterprises, created a conducive environment for the proliferation of Chinese agricultural action in Cameroon. This period was also marked by the outsourcing of Chinese companies, motivated by a drive to experiment with investments abroad. Consequently, special attention was given to the agricultural sector. It is in this vein that China, in 1991, introduced modern cultivation techniques for edible mushrooms to Cameroon (Xinhua, 2013). This gave room for China to test the scope of this culture by transmitting the

necessary techniques to the local population for its promotion and popularisation. Despite the technical difficulties associated with its production, mushroom cultivation is a passion for many Cameroonian producers (interview with a Cameroonian employee working at the Nanga-Eboko ATAC, January 12, 2020). Given this incentive, the Mushroom Sector Development Project (MSDP) was retroceded by the Chinese government to Cameroon in 1996 (MINADER, 2007).

The training and extension process has been reinforced with the construction of ATAC in Nanga-Eboko in 2011. The Chinese Diplomat, Li Changlin, pointed out that its objective is to serve as a base for experimentation and transfer of advanced agricultural technologies throughout the country (Sofack, 2018).

In that same light, an agricultural technical high school, created in Yabassi, has been operating since 2017. Its mission is to train young Cameroonians in all the agricultural specialities to capacitate them for self-employment (Ndoumbe, 2018). The courses taught in this school include plant and animal production and many other transversal sectors (Table 2).

Tableau 2. The organisational chart of YTPAHS

Specialities	First cycle	Second cycle		
Vegetable	Cereal producer	Producer of cereals, pulses and mushrooms;		
production	Producer of market	Root and tuber producer;		
	gardeners.	Producers of perennial crops;		
		Producers of market gardens and fodder;		
		Producers of plans and seeds.		
Animal	Pig breeder;	Monogastric breeder;		
production	Poultry breeder.	Polygastricbreeder;		
		Fish farmer.		
Cross-		Transformer-preserver of agro-pastoral		
cutting		products;		
specialities.		Agricultural equipment maintenance		
		technician.		

Source: the authors

Besides these training centres, China excels in the massive acquisition of land in Cameroon that, most of the time, is considered and qualified as land grabbing (Lagerkvist, 2014).

5.2 Agro-industrial projects and the acquisition of arable land, "a wide-ranging debate"

The 2006 FOCAC gave a new twist to agricultural cooperation between China and African countries (Sofack, 2018). These forums purred growth in investments by Chinese companies in the African agricultural sector (Chaponnière, Gabas and Qi 2011). These companies have acquired great investment capacities that have enabled them to establish themselves everywhere on the continent (Gabas, Xiaoyang, Wang, Anseeuw, Fraser and Ribier, 2014) as with COMPLIANT in Benin, Mali, Madagascar, etc., the China-Africa Cotton Co. (CAC) in Mozambique, Malawi and Zambia, Shaanxi SFAC / Sino-Cam IKO and GMG Global / Sinochem in Cameroon.

Thus, upon its establishment in Cameroon in 2006, the Shanxi Land Reclamation General Corporation acquired a 99-year lease on 10,000 Ha (Sofack, 2018). GMG Global / Sinochem was established in Cameroon in 2008 and later became the main operator of the HEVECAM plantation that covers 40,000 Ha. It also created a new plantation of 45,000 Ha called SUDCAM in 2010 (Gabas, Xiaoyang, Wang, Anseeuw, Fraser and Ribier, 2014; tableau 3).

Tableau 3. Mapping of land acquired by China in Cameroon

Year of	Allocated	Location	Chinese Investors	Planned	sources
Agreement	Land (Ha)			crops	
2006	10,000		Shaanxi		(Sofack,
		Nanga-	SFAC/Sino-Cam		2018)
		Eboko	IKO	rice	
2006	4,000		Shaanxi		(Sofack,
			SFAC/Sino-Cam		2018)
		Santchou	IKO	rice	
2006	4,000		Shaanxi		(Sofack,
			SFAC/Sino-Cam		2018)
		Djore	IKO	Cassava	
2008	40,992		GMG		(Brautigam,
		Niete	Global/Sinochem	rubber	2015)
2010	45,000		GMG		(Gabas and
		Meyomessala	Global/Sinochem	rubber	et al, 2014)
2012	18,365	•	GMG		(Brautigam,
		Kribi	Global/Sinochem	rubber	2015)

Sources: designed by the authors from different sources

For some Cameroonian civil society organisations, this mass land acquisition proves a hindrance for local investors. These organisations further believe that Chinese mass land acquisition poses a threat to subsistence farming and a source of concern for local farmers (Interview with a member of Cameroonian civil society, May 12, 2021).

On the other hand, Cameroonian decision-makers believe that this transmission of arable land to China constitutes a lever likely to boost agricultural growth and development by creating jobs and facilitating technology transfer (interview with MINADER staff, May 14, 2021).

5.3 Building infrastructure and demonstrating agricultural technologies, a growing phenomenon

The FOCAC 2006 marks the beginning of Chinese Agricultural Demonstration Centres in Africa. Cameroon, which pays particular attention to the agricultural sector, is one of the top 10 recipient countries.

In this regard, the old rice farm in Nanga-Eboko that was abandoned by the Taiwanese when Cameroon turned to China in 1971, was chosen to house this centre. The establishment of the infrastructure began in 2011 and extended over two years. The period from 2011 to 2014 was devoted to experiments and trials on rice, cassava and corn. The consolidation of the experiments continued until 2018 with funding from MOFCOM. Over 1,180 people were trained between 2015 and 2020 (Interview with the counterpart director of ATAC on the Cameroonian side, January 10, 2020). The centre is currently in its self-financing phase as it was retroceded in March 2021 to the Cameroonian government (Interview with a Cameroonian staff member working at ATAC Nanga-Eboko, September 12, 2021; figure 2).

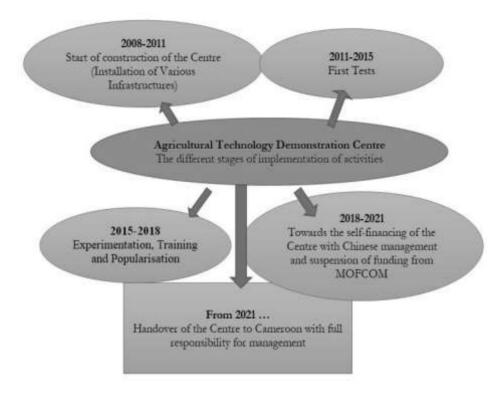


Figure 2. The implementation activities of the Nanga-Eboko Agricultural Demonstration Center

In addition, since 2006 the infrastructural cooperation between these two countries has been enhanced (Tedié, 2014). In 2008, China pledged to build a chemical fertilizer plant worth CFAF 154,805 trillion with a production capacity of 80,000 tons of ammonia and 130,000 tons of urea per year (Table 4).

Tableau 4. Major Chinese projects in the agricultural sector in Cameroon

Project	Year of	Amount in	Locati	Chinese	source
	agreement	FCFA	on	investor	
Chemical fertilizer manufacturi ng plant	2008	154,805,000,000	Kribi	CGC Overseas Construction	(Y Atanga, 2009)
Agricultural technology application	2008	33,157,800,000	Nanga- Eboko	Shaanxi SFAC/Sino- Cam IKO	(Essomba, 2019)

center					
Technical hi gh school of agriculture	2012	6,480,000,000	Yabassi	Shaanxi SFAC/Sino- Cam IKO	(Ndoumbe , 2018)

Source: By the authors based on data collected from various sources

Moreover, it should be noted that China's interventions in the agricultural sector in Cameroon are also part of tripartite cooperation.

5.4. Tripartite cooperation, effective but in its infancy stage

China has been supporting South-South and Triangular Cooperation (SSTC) for several years. In 2015, Cameroon, the Chinese Academy of Agricultural Sciences (CAAS) and the World Bank became involved in triangular cooperation around the Investment and Development of Agricultural Market Project (IDAMP). This project, which should last 5 years (it was extended by 21 months in 2019), aimed to boost the yield of corn, cassava and sorghum sectors to take them from subsistence agriculture to competitive and oriented agriculture in view of commercialisation and industrialisation (Mefenza, 2015). About 120,000 beneficiaries spread across 3,000 cooperatives made up of 300 households have been identified in 34 production basins for its implementation (Table 5). The 266 million US dollars representing the total cost of the project were borne by the three parties (Gabas, Xiaoyang, Wang, Anseeuw, Fraser and Ribier, 2014). The contribution of China and the World Bank amounted to 100 million dollars each and the rest was borne by Cameroon (Interview with a member of the staff of the IDAMP project, August 27, 2020).

Tableau 5. The beneficiaries of tripartite cooperation and the contribution of the three parties

Beneficiaries			_				
People	Cooperatives	Households	Production basins				
120,000	3,000	300	34				
The contribution of	The contribution of the three parties						
WB	China	Cameroon	Total				
US \$ 100,000,000	US \$ 100,000,000	US \$ 66,000,000	US \$ 266,000,000				

Source: By the authors from data collected from various sources

However, this type of cooperation lacks a consultation framework that would have been useful for sharing experiences (Gabas, Xiaoyang, Wang, Anseeuw, Fraser and Ribier, 2014). This lack of synergistic action is attributed to the existing conflict of logic between China and Western countries. The logic of action of the latter usually comes into conflict in agricultural development in Africa and Cameroon in particular (Niu, 2016).

6. The impact of China's interventions on the agricultural sector in Cameroon

The impact of China's interventions can be assessed at several levels. However, for this research, it will be based on the transfer of agricultural technologies.

6.1. A relative technology transfer

For several decades, China has been promising the transfer of technologies to African countries. This technology transfer is expected to take place through pieces of training (Agbebi, 2019). China's agricultural development experience, which has enabled it to significantly reduce poverty within a generation, can serve as a strategic model for Africa(Xiaoyun, Gubo, and Haimin, 2013). In 2006, during the third FOCAC in Beijing, China pledged to commission 100 agricultural experts to Africa and to set up 10 agricultural technology demonstration centres, of which Cameroon is one of the beneficiary countries. These centres are an embodiment of Chinese technocratic rationality and they are a critical environment for transferring knowledge (interview with staff working with the Chinese at ATAC in Nanga-Eboko, January 10, 2021; Xu, Qi, Lixia and Mukwereza, 2016). By combining theoretical and practical teachings, these centres empower African agricultural technicians and farmers (Jiang et al., 2016).

Despite the gap between these discourses and the effectiveness of technology transfer in the field, a relative transfer of agricultural skills is perceptible. Indeed, the ATAC of Nanga-Eboko has been organising training and extension sessions since 2015, the goal of which is the transfer of agro-technology in the cultivation of rice, corn, and cassava to local Cameroonians. This has enabled over 1,180 people to take part in various pieces of training (Interview with the counterpart director of

ATAC on the Cameroonian side, December 21, 2020). According to the ATAC activity report transmitted to the Minister of Agriculture and Rural Development of Cameroon, Mr Henri EYEBE AYISSI in February 2018, it appears that three years after implementing its pilot phase (February 2015 to February 2018), the cumulative evaluation of ATAC's activities is as follows:

- research and experimentation activities within ATAC were conducted in three trials with 10 Chinese varieties to grow corn and three trials with 15 Chinese varieties to grow rice;
- 34 training sessions for 1,183 learners were organised;
- the development of about 21.5 Ha of land for demonstration plots of corn (8 Ha), rice (6 Ha) and cassava (7.5 Ha) between 2016 and 2018;
- the production of 8 tons of paddy rice (NERICA variety), 20 tons of corn (CMS8704) and a timber yard with a capacity of 700,000 cuttings;
- 1,500 production data sheets on rice, corn and cassava respectively;
- 2533 producers trained in production techniques for rice, corn and cassava respectively in the field;
- 5 interns from state universities and professional agricultural schools were supervised as part of their academic internships;
- about 20 Ha of ploughed land intended for producers near the project site.

In sum, these activities were articulated around four aspects notably, research and experimentation, training and technical internships, the popularisation of production techniques, and farming and sustainable development (Interview with a Cameroonian staff member working at Nanga-Eboko ATAC, December 27, 2020).

The opening of the YTPAHS in 2017 also contributed to the transmission of agricultural knowledge to young Cameroonians. Over 650 first and second cycle students are being trained in this high school (interview with a teacher of the Technical Agricultural and Professional High School of Yabassi, May 2, 2021). Over 2/3 of these young people are undergoing training in plant and animal production (Table 6). Such actions improve China's image not only in Cameroon but across the continent (Xu and Zhang, 2020).

Tableau 6. Transmission of agricultural skills to the local Cameroonian population through YTPAHS

First cycle enrollments					
	2017	2018	2019	2020	Total
Vegetable production	9	11	18	14	52
Animal production	4	4	9	16	33
Second cycle enrollments					
	2017	2018	2019	2020	Total
Vegetable production	24	31	52	58	165
Animal production	32	55	68	45	200
Cross-cutting sectors	19	61	71	59	210

Source: By the authors from data collected from various sources

ATAC and YTPAHS are a smokescreen to the imperialist and land-grabber image of China that has long been decried by Cameroonian civil society organisations. However, China's interventions in the agricultural sector in Cameroon are not always perceived in the same way (Hou, 2011; Sofack, 2018). Other Chinese actions such as the massive acquisition of agricultural land and the lack of collaboration with the local population during the execution of projects revolt the local population and therefore require improvement (interview with a member of Cameroonian civil society, December 22, 2020).

6.2 The limits of China's interventions in the agricultural sector in Cameroon

China's agricultural interventions in Cameroon are not tied to political reform chains. This undermines efforts to strengthen transparency, good governance (Isaksson and Kotsadam, 2018), the maintenance of social and environmental standards and proves to be an obstacle for the local population who could not fully benefit from them (interview with a member of Cameroonian civil society, January 30, 2020). The biggest beneficiary of these interventions in Cameroon would therefore be the local ruling class. This exacerbates the strong social inequalities in the country (interview with a member of Cameroonian civil society, December 22, 2020). Local agricultural entrepreneurs and peasants who ought to be the main beneficiaries are sidelined because they cannot bid for projects funded by China (interview with a member of Cameroonian civil society, December 22, 2020). That Chinese projects are linked to the supply of Chinese goods and services, i.e., aid projects executed by

predominantly Chinese companies, labour and equipment also constitute a blockade for the local population (interview with a Cameroonian employee working at ATAC in Nanga-Eboko, April 02, 2020). The relationship between ATAC and the Institute of Agronomic Research for Development (IARD) which is essentially administrative(Gabas, Xiaoyang, Wang, Anseeuw, Fraser and Ribier, 2014) is not likely to facilitate the popularisation of the results of experiments carried out by Chinese experts within the said centre. This would have been made easy by associating IARD, which has accumulated a lot of experience in the agricultural sector in Cameroon (interview with an IRAD researcher, January 30, 2020). The involvement of civil society organizations could also be an asset. In sum, the non-involvement of local populations (researchers, academics, farmers' organisations, etc.) when developing and executing projects slows down the process of skills transfer (interview with an IRAD researcher, January 30, 2020).

However, the impact of these interventions on family farming, which aims to be the basis of food security in Cameroon, is not perceptible. Cameroonian peasants continue to struggle with difficult changes and survival economies, coupled with increasing marginalisation processes by Chinese agricultural entrepreneurs who see themselves as business leaders (interview with a farmer in Nanga-Eboko, January 30, 2021).

7. Recommendations: Make the population the main target of interventions

For a much more dynamic and promising agricultural cooperation between Cameroon and China, it would be necessary for these two partners to:

- support and develop family farming,
- always carry out an impact study before setting up a project resulting from cooperation,
- coordinate the interventions of Chinese partners at MINADER for more effective monitoring,
- involve local populations in the development and implementation of Chinese development projects.

Chinese agricultural interventions in most cases do not involve peasants. Peasants, therefore, become "social forgotten", "left behind" (interview with a

farmer in Nanga-Eboko, January 12, 2020). To reverse this trend, Chinese investors must integrate peasant communities and family farms into their projects given that any initiative linked with farming would be beneficial if locals are taken into consideration (interview with a farmer in Nanga-Eboko, January 12, 2020).

The Cameroonian government must initiate studies of the impact of Chinese agricultural projects on the local population and the environment before their implementation. Therefore, IRAD researchers and Cameroonian scholars must be involved in this study as well as in the design and implementation of China's agricultural projects. MINADER should not be content with an administrative relationship with Chinese agricultural companies rather, it should seek to coordinate their interventions to minimise the risks of failure.

8. Conclusion

Ultimately, to claim that Sino-Cameroonian agricultural cooperation poses a threat to the local Cameroonian population is only partially true. Certainly, Chinese agricultural investments in Cameroon have paved the way for practices that have been strongly criticised in recent years including its involvement in land grabbing, its lack of collaboration with IRAD and local universities, the lack of local representativeness in the design and implementation of agricultural projects implemented by China, which prove to be an obstacle to local development.

However, China's presence brings hope for agricultural development in Cameroon. The introduction of modern farming techniques and the demonstration of agricultural technologies which underpin China's interventions in Cameroon constitute an opportunity that gradually reinforces the skills of the local population.

This study shows that China is neither a charity organization nor a predator of Cameroon's natural resources. It is a country that seizes opportunities it comes across in the field of cooperation, driven by the quest to satisfy its interests. It is therefore up to Cameroon to adopt winning strategies to make the most out of Chinese investments.

Finally, from this study, it emerges that China's agricultural interventions in Cameroon are relevant in the sense that they contribute to a relative transfer of technologies. The various projects implemented prove that Sino-Cameroonian agricultural cooperation has a bright future ahead. It would therefore be important for Cameroonian and African

researchers to take a greater interest in this area of cooperation with China in view to further analyse the surrounding issues and subsequently facilitate the sharing of experiences and knowledge (Gabas and Ribier, 2015).

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