

China - Morocco - Africa: An Innovative Agribusiness Partnership¹

By Fathallah Oualalou

Summary

The purpose of this paper is to propose the establishment of a forward-looking partnership between China and Morocco, centered around the agri-food issue in Africa. It is in Africa that the food demand will increase in a very significant way during the 21st century due, in particular, to population growth and the acceleration of urban development. Africa must succeed in its agricultural revolution in order to fight hunger and poverty, ensure the industrialization of its economy and bring its urban development under control. Today, the future of Africa's agribusiness is a concern for the entire world. It affects, in particular, its demographic balance and is therefore a matter of global importance.

Introduction

Why should China - a global power - and Morocco - a developing country in North Africa - work together on the agri-food issue in Africa? The answer is simple: the two countries boast considerable assets in the production of phosphates – a key component for the production of fertilizers, which are necessary for any increase in agricultural output. Today, China is the largest producer of phosphate and phosphate derivatives, which it uses mostly to cover its domestic needs. As for Morocco, it has the largest phosphate reserves in the world and is the world leading phosphate exporter.

The two countries are developing special relations with the African continent today: since the beginning of this century, China has become the first economic partner of African countries in all sectors: trade, aid and foreign direct investment (FDI). Africa is both a key element and a major relay in China's «Belt and Road» initiative launched by President Xi Jinping in 2014. Agriculture is an essential component of China's cooperation relations in Africa.

As for Morocco, it has been seeking, for some years now, under the stewardship of His Majesty the King, to be more deeply rooted in Africa in order to fulfil a need for regional integration. In this regard, OCP, Morocco's national phosphate production group, is called upon to promote a South-South agro-industrial partnership involving African countries.

¹ This Policy Brief sums up the arguments set out in the Policy Paper 17-10 on the same subject by Fathallah Oualalou.

As regards China, the demand for food (and hence fertilizers) is above all for domestic needs. In fact, Chinese agricultural development over the last four decades can serve as a model for many African countries. For this reason, the first part of this study is devoted to the agricultural question in China. The second part will concern Chinese cooperation in the agricultural sector in Africa and agribusiness projects proposed by Morocco to some African countries.

I. The agricultural question in China

With a surface area of 9,562,911 square kilometers (the third largest country in the world) and a population of 1.371 billion people (the world's most populous country – soon to be soon overtaken by India), China is the second largest economy in the world, with a GDP exceeding \$ 10,000 billion in 2014.

Having 106 million hectares of arable land, 514 million hectares of agricultural land and 212.4 million hectares of forest land, China is an agricultural powerhouse which manages to feed more than 20% of the world population. However, it has only 9% of the world's arable land and its water resources represent only 9.5% of the world's resources. Finally, 40% of the country consists of mountains or deserts (Gobi and Taklamakan).

Agricultural activity now accounts for 10% of GDP – considerably less than when the policy of reform and opening up was launched in 1979. China's agricultural flagship products are of a vegetable nature: wheat, rice, corn, potato, soy, beet, sugar cane and fruits and vegetables. China is the first world producer of rice, wheat and potato. It is the second largest producer of maize.

Notwithstanding the major progress made in recent years and its contribution to the massive drive for industrialization and urban development, Chinese agriculture has to overcome a number of constraints and meet certain challenges. In a context of rising purchasing power, it fails to respond to a growing demand for food which is increasingly diversified; the structural duality of land constitutes a major impediment to the progress needed as far as agricultural supply is concerned, given an ever-increasing demand; the scarcity of water resources is real concern: water availability in China is much lower than the world average. Poor distribution of water resources has

been a growing problem across the country. Despite the progress made, average output rates reflect the duality of land use and differentiated technical levels, both for animal and vegetable production. Rising production costs are a new source of constraint for Chinese agriculture. The issue of malnutrition is still on the table, although it is less acute than in the past. The impact of natural disasters is also significant. China is the country which is exposed the most to natural disasters in the world. The latter affect the rural world and agriculture: floods, droughts, waterlogging, landslides, typhoons, mudslides, hail, wind gusts and freezing temperatures. Meeting the above challenges is a top priority given, in particular, a demand for food that will increase significantly by 2030-2050; hence the diversity of actions and public policies in this regard.

« China's traditional customers for Chinese agricultural products are Japan (19%), the United States (12%) and South Korea (7%). These countries import vegetables, fresh or processed fruits, processed meats and fish products. »

China is an agricultural powerhouse. It is the world's leading producer in several basic commodities. In terms of foreign trade, however, and despite a large trade balance surplus, China suffers from a structural deficit in its agri-food trade with the rest of the world. In 2014, its agri-food exports stood at 56.8 billion euros, while imports exceeded 88.6 billion euros, i.e. a deficit of 32 billion euros. The three main products behind this trade imbalance are sugar (50% of domestic needs is imported), edible oil (42%) and soybean (20%). China's soybean purchases account for 60% of its total trade. Dependence on the livestock sectors, mainly dairy, is also on the rise. Given the size of the Chinese market, its imports necessarily have a direct impact on the world market for agricultural raw materials.

China is the largest agricultural customer of most of the major agricultural exporting countries in North and South America, Oceania and Southeast Asia. Covering 23% of China's agri-food imports, the United States ranks first in terms of value. China is the United States' second largest agricultural customer. It is Brazil's largest client (21% of Chinese agricultural imports).

China's traditional customers for Chinese agricultural products are Japan (19%), the United States (12%) and South Korea (7%). These countries import vegetables, fresh or processed fruits, processed meats and fish products. Naturally, Chinese tea is sold all over the world.

II. China, Morocco and the agri-food issue in Africa

Today, Africa is of strategic importance, both for China and for Morocco. As a global power, China is present across the continent. Thanks to the initiatives of His Majesty King Mohammed VI, Morocco has expressed a desire to strengthen the bond linking it to its African roots at the political level (return to the African Union in 2016) as well as its will to promote the economic integration of African countries. Given its geographical location, it also aims to position itself as a relay country between Africa and Europe. This mission is clearly consistent with China's Belt and Road initiative.

China's agricultural cooperation activities in Africa are based on the fact that the continent is home to 30% of the world's undeveloped arable land and that it is expected to play a major role in global food security, including that of Africa itself, given its population growth and its dynamic urban development. However, the increase in demand for food is also attributed to China - both quantitatively and qualitatively. Thus, as far as China is concerned, the need to develop African agriculture serves a twofold objective: to meet the growing food needs of African countries and also to help meet China's additional food demand. This means that, in the future, Africa will have to contribute to feeding China.

« China's agricultural cooperation activities in Africa are based on the fact that the continent is home to 30% of the world's undeveloped arable land and that it is expected to play a major role in global food security, including that of Africa itself »

In view of the above, Chinese companies - just like Western firms and Gulf countries, have bought or leased farmlands in many African countries, including the DRC, Zambia, Sudan, Angola, Guinea, Tanzania, Gabon, Ghana, Mali, Togo, Nigeria, Mauritania, Mozambique, Sierra Leone and Cameroon. According to a number of

sources, Chinese companies are believed to exploit about 5% of arable land in East, Central and West Africa; other sources put that figure at only 250,000 ha across Africa.

The African countries most concerned by the presence of Chinese companies are, in order of importance, Mozambique (800,000 ha) Zimbabwe (101,000 ha), Cameroon (10,000 ha) and Uganda (4,000 ha).

Chinese companies operating in Africa produce rice, maize, cassava, sugar and market gardening for local markets, and cotton, cocoa, rubber, palm oil for export to other countries, mostly to China. Through investment projects, Chinese companies produce wood from some African forest areas.

The China-Africa partnership in the farming sector concerns aid actions aimed at fostering technological innovation in this field. Thanks to Chinese cooperation, some 25 agricultural demonstration centers were set up, dedicated to the use of high-yielding seeds and Chinese phytosanitary products as part of the «green revolution» approach. China has also carried out actions in some of Africa's poorest regions with WFP support to combat malnutrition.

« The African countries most concerned by the presence of Chinese companies are, in order of importance, Mozambique (800,000 ha) Zimbabwe (101,000 ha), Cameroon (10,000 ha) and Uganda (4,000 ha). »

In this critical period for African economies, the Chinese president convened the Johannesburg Summit to refurbish the foundations of the Sino-African partnership. In addition to proposals on financing, China has set out to support an industrialization process of some African economies as part of a co-production approach, even relocating certain activities, some of which related to the agri-food sector. These proposals indicate that the Chinese economy is transitioning to a new model of development based on the domestic market, higher wages, saving of raw materials, use of state-of-the-art technology and promotion of the green economy. More broadly, this new partnership is premised on the logic of the Belt and Road strategy. During this 21st century, Africa will be at the heart of the food issue due to demographic reasons and also prospects for its own rapid urbanization.

According to the UN June 2017 report on World Population Prospects, the world population will edge closer to 10 billion mark by 2050, i.e. an increase of more than 30

percent compared to the current figure (7.55 billion). After 2050, population growth will continue, albeit at a slower pace. At the end of the century, the world population will stand at 11.18 billion. Over the next 30 years, the most significant population increase will take place in Africa. Europe's population will decline and there will be a relative drop in the number of Asians.

« Thanks to Chinese cooperation, some 25 agricultural demonstration centers were set up, dedicated to the use of high-yielding seeds and Chinese phytosanitary products as part of the «green revolution» approach. »

The Asian population, which accounts for 60% of the world population in 2017, will see its share drop to 43% in 2100. Conversely, Africa's population will increase from 17% (1.2 billion people) to 40 % (4.4 billion) during the same period. In 2030, with a population of 410 million, Nigeria will be the third most populous country in the world after India (1.5 billion) and China (1.4 billion). More than half the population increase in the coming 30 years will be concentrated in 10 countries, 6 of which will be in Africa: Nigeria, the DRC, Ethiopia, Tanzania, Uganda and Egypt. Urban development will take place on an unprecedented scale throughout the century. According to the same sources, the number of city dwellers in Africa will be 1.2 billion in 2050, against 400 million in 2017, and only 30 million in 1960.

Together with potash and nitrogen, phosphates are an essential fertilizer component. The future of agriculture and the global food issue are closely linked to the evolution of phosphate production, particularly for major population centers today and into the future: namely Africa, India, China, the United States and Brazil.

In terms of global reserves, one country, by far, is predominant: Morocco, with 50 billion tons, or 72% of known reserves in the world. It is followed by China, with 3.7 billion tons, Algeria (2.2 billion), Syria (1.8 billion), South Africa (1.5 billion), Russia (1.3 billion), Jordan (1.3 billion), Egypt (1.2 billion) and the United States (1.1 billion). Then there are countries with average reserves: Saudi Arabia (960 million tons), Tunisia (100 million tons), Senegal (50 million tons) and Togo (30 million tons).

According to the US Geological Survey (USGS), China's phosphate reserves are estimated at 3.7 billion tons. However, according to the Chinese media, Guancha,

those reserves are significantly higher, standing at 17.6 billion tons in 2007, before the Kaiyang mine (Guizhou province) was discovered and announced in July 2017. It does specify however that, out of this total, the share of phosphate reserves with a phosphorus pentoxide content exceeding 30% (the industrial recovery level) is only 1.6 billion tons.

In terms of production, China is currently the world's leading producer, with a production ranging between 80 and 100 million tons. This is three times more than Morocco's production, which stands at only 30 million tons, followed by the United States (27.6 million tons), Russia (12.5 million tons), Jordan (7.5 million tons), Egypt (5.5 million tons), Tunisia (4 million tons), Saudi Arabia (3.3 million tons), South Africa (2.2 million tons), Senegal (1 million tons), Togo (1 million tons) and Syria (750,000 tons).

« According to the UN June 2017 report on World Population Prospects, the world population will edge closer to 10 billion mark by 2050, i.e. an increase of more than 30 percent compared to the current figure (7.55 billion). »

These figures clearly show that phosphate production concerns two countries in particular: Morocco, the global leader in terms of phosphate reserves and exports, and China, world leader in terms of production and the second ranking country in terms of reserves. With a production of almost 100 million tons, China will have consumed all of its reserves in less than 40 years which, for China, is cause for major concern. According to the statistics available, the production of rock phosphate has continued to increase. Since the beginning of the century, it has more than doubled, reaching 80.7 million tons in 2016. However, its exports seem to be stagnating, not to say decreasing: 358,000 tons in 2013 and 278,000 tons in 2016. As regards acid production, it increased then it has stabilized since 2015: 17.1 million tons in 2013, 16.2 million tons in 2016. However, acid exports continue to increase, with 285,000 tons in 2013, and 352,000 tons in 2016.

DAP and MAP fertilizer exports vary from one year to the next, with a tendency to increase. For Diammonium Phosphate (DAP), 2 million tons were exported in 2015, 1.4 million tons in 2016 and more than a 10% increase in exports is expected in 2017. For Monoammonium

Phosphate (MAP), exports stood at 1.2 million tons in 2015, 0.6 million tons in 2016 and, again, a very sharp increase (approximately 54%) was expected in 2017.

Thus, Chinese exports of phosphate fertilizers are increasingly competing with those of Morocco and Saudi Arabia on major markets: Australia, India, Brazil, Pakistan, Vietnam and Thailand. The phosphate production structure in China is basically characterized by the large number of companies involved in the exploitation of the raw material and in its conversion into phosphoric acid: there are a dozen public companies and a multitude of private producers, using traditional ways, even operating informally.

« According to the US Geological Survey (USGS), China's phosphate reserves are estimated at 3.7 billion tons. However, according to the Chinese media, Guancha, those reserves are significantly higher, standing at 17.6 billion tons in 2007, before the Kaiyang mine (Guizhou province) was discovered and announced in July 2017. »

In terms of production costs - and therefore competitiveness - China is lagging behind major producing countries. Saudi Arabia has the lowest costs, followed by Morocco, Russia, the United States and finally China.

The diversity of small producers causes disruptions and problems:

- Accumulation of 50% excess production for the two fertilizers: ammonium phosphate and diammonium phosphate;
- Production overcapacity, which is increasing and leading, quite naturally, to a fall in prices in international markets, to the detriment of other producing countries, particularly Morocco;
- Differentiated and contradictory policies and behaviors by central government authorities and provincial and local authorities;

Rising pollution risks which represent a threat to the environment, in particular for rivers which are polluted by the by-products that are spilled in rivers, in particular by the illegally stored phosphogypsum.

It is essential, for China, to reduce phosphate production, given the range of challenges faced: reserves will be used up in less than four decades, the accumulation of

overcapacity and the risk of environmental disasters. The Chinese government needs to streamline and re-engineer the phosphate production and processing system. The bulk of phosphate reserves in the world is in Morocco. Phosphate reserves are located in four major sites: Ouled Addoun (44% of total reserves), Gantour (37%), Meskala (17%) and Boukraa (2%).

OCP Group, a national company - the largest in the country - has been in charge, since the first phosphate discovery was made in 1920, of the extraction, upgrading and export of phosphate and phosphate derivatives, namely acids and fertilizers. With 28% of global phosphate exports - all phosphate products included - OCP Group is the leading company in international phosphate trading. With a production capacity of 32 million tons of phosphate rock, OCP has, since 2017, a production capacity of 12 million tons of fertilizer at the processing sites of Safi and Jorf Lasfar, in particular.

Morocco has been, for several decades, the leading exporter of rock phosphate, phosphoric acid and fertilizers. From the 1960s until the end of the twentieth century, phosphate production of the USSR (Russia) and the United States exceeded Moroccan production levels, and mid-level producing countries, such as Algeria, Tunisia, Syria, Jordan, Senegal, Togo, South Africa and, more recently, Saudi Arabia, competed with Moroccan exports.

Nevertheless, OCP remains in a leading position around the world. OCP sales cover 90% of phosphate-related imports from North America (USA), 30% from South America (Brazil), 25% from South Asia (mainly India), 38% from Europe, 36% from Oceania, 9% from East Asia and 24% from Africa. Over the past three decades, OCP has developed industrial partnerships with major customers among emerging countries (India and Brazil), in the form of joint ventures that allow for the processing of Moroccan phosphates in both Morocco and host countries (see appendix on the destination of Moroccan exports of phosphate and phosphate derivatives).

Thanks to its phosphate reserves, the Kingdom of Morocco can contribute to launching a genuine green revolution in Africa, in the same way Moroccan fertilizers have been contributing, for several decades now, to India's green revolution. For example, cassava yield per hectare in India today stands at 36 tons, compared to just 11 tons in Africa. As well as continuing to support the

development of the agricultural sector in Morocco, OCP has set up agricultural caravans in Senegal and Mali to ensure the widespread use of fertilizers and train farmers in this regard.

The group has set a new subsidiary, OCP Africa, to steer its growth in the African market. The OCP approach aims to cover the entire value chain, including the construction of local fertilizer factories, the development of logistics distribution capacity, investment in research for the development of fertilizers suited to the needs of the soils and crops (customized fertilizer), and the mapping of African soil fertility and related fertilizer needs.

« Africa could become the focal point of a purposeful, innovative partnership between China, Morocco and African countries – i.e. a triangular partnership. »

The OCP group has developed «The House of the Farmer» concept to bring together the agricultural sector stakeholders around the entire range of products and services covering all segments of the agricultural value chain. By 2020, the OCP Group plans to open 10 Houses of the Farmer in 10 African farming towns with a view to reaching 1 million farm families. The OCP has raised an investment of 490 million euros to build a complex, at Jorf Lasfar, which is dedicated in full to Africa (the African Fertilizer Complex). It will produce 1.4 million tons of sulfuric acid, 450,000 tons of phosphoric acid and 1 million tons of fertilizer.

Africa's needs to promote farming are immense. The continent accounts for only 3% of global fertilizer consumption. This shows there is an urgent need for fertilizers to be used more extensively so that African agricultural development can be in full swing. It is through agriculture that our continent can fight poverty, achieve industrialization, ensure sound urban development and create the momentum needed for Africa's development.

As early as 2014, OCP came up with an industrial partnership approach to help promote African agriculture. It signed with Gabon an agreement to establish joint ventures in the two countries to produce fertilizer, combining Moroccan phosphates and gas from Gabon.

However, it is with Nigeria and Ethiopia - two population giants in Africa - that OCP signed the most important

agreements expected to lead to industrial partnerships that will serve African agriculture and the food question.

With Nigeria (180 million inhabitants today, 410 million in 2030), the OCP launched a cooperation plan in December 2016 to sell to Nigerian suppliers, at an initial phase, 3 million tons of DAP fertilizers over a three-year period. Moreover, a strategic agreement was concluded between the Dangote Group and OCP for the construction of a fertilizer manufacturing plant in Nigeria and a phosphoric acid plant in Morocco in a cross-investment move.

« Promoting African agricultural development basically means contributing to the fight against poverty; it means allowing for the creation, in rural areas, of financial surpluses to foster the continent's industrialization and streamline urban development »

The agreement signed between OCP and Ethiopia (100 million inhabitants), represented by Chemical Industries Corporation (CIC), is expected to lead to the building of a complex to produce fertilizers, involving an investment of \$ 3.7 billion. In the first phase, an investment of \$2.4 billion will go to the construction of a plant at Dire Dawa (in eastern Ethiopia) with a production capacity of 2.5 million tons of fertilizer by the year 2022, using Ethiopian-sourced potash and gas and OCP-supplied phosphoric acid.

During the same year, OCP signed an agreement in principle with Rwanda to build a bulk blending unit for the production of fertilizer. It also signed a memorandum of understanding with the Tanzania Fertilizer Company (TFC) for the same purpose.

III. Towards triangular partnerships on the agri-food issue in Africa

Africa could become the focal point of a purposeful, innovative partnership between China, Morocco and African countries – i.e. a triangular partnership. The goal of this initiative would be to promote a green revolution and meet basic food needs in Africa. Promoting African agricultural development basically means contributing to the fight against poverty; it means allowing for

the creation, in rural areas, of financial surpluses to foster the continent's industrialization and streamline urban development. Given their respective strengths in terms of phosphate reserves and production, China and Morocco can work together to popularize instruments for agricultural innovation in Africa.

This action, which may be spearheaded jointly by the two countries, should lead them to engage a common reflection that would enable China to rationalize and streamline its phosphate production, better conserve its reserves, control producer prices and fight risks of destructive pollution for the natural environment.

The two countries - one the leading producer, and the other the leading exporter having, above all, the largest phosphate reserves in the world - should work together responsibly to rationalize and regulate production and processing of the raw material. This should help to solve the world food problem, especially in Africa. Food security has become a major concern in a globalized world given, in particular, the challenges relating to population growth in the coming decades, especially in Africa. It would be a partnership centered on food security – one of humanity's major needs. It is a triangular partnership in which Morocco and China would work together in Africa. Such a worthwhile partnership would benefit not only the two countries, but also a continent which will increasingly become the main focus of the world and of humankind in the decades to come.

Biography

- Chinese agriculture. Economic missions. Ministry of Economy, Finance and Industry. La France. Sept. 2006
- Agricultural policies around the world, China Dossier. Ministry of Agriculture and Forestry. La France. 2017
- Agriculture in China. The files of the media library of the Institute of Higher Studies for Science and Technology Technology. La France. 2016.
- Statistics of reserves and production of phosphates. USGS, US Geological Survey. States Geological and Moroccan Institute of Scientific and Technical Information. 2012.
- Statistics of Chinese Customs. Beijing CNCIC. 206.
- UN Report, Demographic Trends in the World and Africa. New York. June 2017.
- Ministry of Agriculture and Fisheries. Morocco. The AAA initiative. 2016.
- UN-Habitat report. New York. 2016.
- China Phosphates Producers Association. China Customs. CNCIC. OCP. December 2016.
- Guillaume PITRON. In China, the red line of the green turn. The diplomatic world. No. 760. July 2017.
- Fathallah Oualalou. China and us. Respond to the second overshoot. Crossroads. Casablanca.2016.
- Fathallah Oualalou. Phosphatic policy ... in: About Moroccan economy. SMER. Rabat. 1980. and North Africa Yearbook. Aix en Provence. CNRS. 1974

About the Author, Fathallah Oualalou

Fathallah Oualalou is an Economist and former Minister of Economy and Finance, of Privatisation and Tourism. He also used to be the Mayor of the City of Rabat.

Fathallah Oualalou was born in 1942 in Rabat. He graduated in economy from Mohammed V University in 1964 and obtained a diploma on economy in 1966 in Paris. He was appointed Ministry of Economy in 1998 and Ministry of Finance in 2002. He is professor at Mohammed V University and chairs the Association of Moroccan Economists and Union of Arab Economists. After over 20 years as member of the Municipal Council, he was Mayor of Rabat from 2009 to 2015.

About OCP Policy Center

The OCP Policy Center is a Moroccan policy-oriented think tank based in Rabat, Morocco, striving to promote knowledge sharing and to contribute to an enriched reflection on key economic and international relations issues. By offering a southern perspective on major regional and global strategic challenges facing developing and emerging countries, the OCP Policy Center aims to provide a meaningful policy-making contribution through its four research programs: Agriculture, Environment and Food Security, Economic and Social Development, Commodity Economics and Finance, Geopolitics and International Relations.

Les opinions exprimées dans cette publication sont celles de l'auteur.



OCP Policy Center

Ryad Business Center – South 4^{ème} Etage – Mahaj Erryad, Rabat - Maroc

Email : contact@ocppc.ma / Téléphone : +212 5 37 27 08 08 / Fax : +212 5 37 71 31 54

Site : www.ocppc.ma