

Algeria dependency on imported food D. Kouri ¹

Abstract :

Algeria is one of the largest importers of agricultural food. Drought and irregular rainfall are among the sector's most important obstacles to development, resulting in huge volatility in terms of agricultural output. Public authorities have neglected the agricultural sector to the advantage of industrial energy. Therefore, that policy implemented has played a large part in deepening food security problems. The agricultural sector's situation suggests that the public authorities have not clearly been sustained as donor support for this sector. Thus, We shall highlight the main issues that inhibit optimal development of agricultural sector.

Key words: Algeria, agricultural sector, imports, wheat, milk, constraints.

Résumé:

L'Algérie est l'un des plus gros importateurs d'aliments agricoles. La sécheresse et les pluies irrégulières constituent l'un des principaux obstacles au développement du secteur, entraînant une volatilité énorme en termes de production agricole. Les pouvoirs publics ont négligé le secteur agricole au profit de l'énergie industrielle. Par conséquent, cette politique a joué un rôle important dans l'approfondissement des problèmes de sécurité alimentaire. La situation du secteur agricole laisse supposer que les pouvoirs publics n'ont pas été clairement un soutien en tant que support pour ce secteur. Alors, nous mettrons en évidence les principales questions qui entravent le développement optimal du secteur agricole.

Mots clé: L'Algérie, secteur agricole, importations, blé, lait, contraintes.

المخلص

تعد الجزائر أحد أكبر مستوردي الغذاء الزراعي. ويعتبر الجفاف وعدم انتظام هطول الأمطار من بين العقبات الأكثر أهمية في تنمية القطاع، مما أدى إلى تقلبات حادة من حيث الإنتاج الزراعي. حيث أهملت السلطات العمومية القطاع الزراعي لصالح الصناعة الطاقوية. ولذلك فقد لعبت هذه السياسة دورا كبيرا في تعميق مشاكل الأمن الغذائي. فيوحي وضع القطاع الزراعي بأن السلطات العمومية لم تكن دعما منتظما لهذا القطاع.

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كلمات مفتاحية: الجزائر, القطاع الفلاحي, الاستيراد, القمح, الحليب, المعوقات.

1- Introduction

Algeria is generally characterised as one of food insecure countries owing to its heavy reliance on food imports. Food production is not sustainable due to biodiversity loss, climate change, degradation of natural resources, as well as vulnerability of rural community, and thus high dependency on imports. As a result, the import bill for imported food, especially wheat and milk, is the largest. The cause of interest is the awareness that the demand for foodstuff has been growing and will continue due mainly to urbanisation and demographic growth. Abis writes: “The dependency of the Mediterranean Arab countries on international markets is growing,The sums of agricultural imports represent a considerable share of public budget”(1). Public budget costs have escalated and they will continue to do so in the future if the public authorities’ policy is not changed. An important question can be asked: Can such levels of public expenditures be sustainable in the long term?

Agriculture contributed 10% of Algeria’s GDP and employed more than 2.4 million people roughly equal to one-fifth of the entire labour force in 2014. This is significant when compared to the hydrocarbons sector, which contributes about a third of GDP but accounts for just 2% of total employment (2). Public authorities tended to neglect rural areas and agriculture to the advantage of urban areas and industrial energy, by investing scarce resources in it. This was at the cost of declining cereal production and farm labour force in agriculture. During the oil boom of the last few years, when rising oil rents combined with rapid population growth fuelled rising demand for food, the food security gap exploded, leading to a dramatic increase in food imports.

The agricultural sector fails to meet the growing consumption requirements in Algeria. That has led to a marked increase in the demand with emerging risks of food dependency. That is the reason

for which we believe that it does deserve a necessary look at the food production in Algeria. The aim of this paper is to analyse or to point out the main problems and constraints obstructing the food production, in particularly wheat and milk products.

2- Overview of the agricultural sector

The importance of agriculture as a provider of public goods has been recognised, however, the effectiveness of efforts in rural development and environment protection are not always clear and consistent. The government should make this sector the main engine of economic growth in the country, with advantages in terms of GDP growth, job creation, and exports. But Algeria is not a major producer of agricultural goods and thus depends on food imports to meet domestic demand. In this context, we should underline that the agricultural sector is more vulnerable to the impact of climate change, drought, fire and desertification. The country has about 8.4 million hectares of arable land representing roughly 3% of its total surface area, but only 919000 ha are permanently cultivated. Algeria still imports about \$9 billion in food annually and is one of the world's largest importers of wheat \$2.1billion and dairy products \$0.9 billion (3). The European Union is Algeria's major supplier; accounting for almost 45% of imports as a result of its geographic proximity to Europe, also north and South America have an important share of the market.

The mass migration from rural areas to the cities due to insecurity in the 1990s, has its negative impact on the agricultural production. According to the Technical Institute for Field Crops (ITGC), food imports increased nearly 65% in the last five years from 4.3 billion Euros in 2009 to 7 billion Euros in 2013. Food represented 17.5% of total imports in 2013, and its value has continued to rise in 2014. Algeria has imported 6 to 7 million tons of wheat over the past several years of which bread wheat represent 75 to 83% of the wheat imported (table n° 1). Algeria will continue to import wheat because domestic production is still mostly weather driven and as a result of increased urbanisation. Annual domestic

Table n° 1. Algeria total wheat imports (10³ tons)

2010	2011	2012	2013	2014
6301	6593	6297	6922	7278

Source: Algerian official trade data

consumption is estimated at 8 million tons, forcing Algeria to rely on world markets to make up the difference. Algerian wheat output dropped to 4.25 million tons in the 2010/11 season. However, the particular hot, dry weather in April 2014 reduced the production to 3.4 million tons, 35% below 2013 production of 4.91 million tons as shown in the table 2. Thus efforts to scale up production will take an added urgency in the near term. Although Algeria has extended the area used for cereal production, it has the lowest cereal returns of the Mediterranean. Compare Algeria's 4.3 million tons harvested on 3 million ha in 2007 to Egypt's 7 million tons on just 1.1 million ha (4). As a consequence, million ha of land in the North is considered susceptible to loss of productivity as a result of soil erosion.

Table n° 2. Algeria wheat production (in million tons)

2009	2010	2011	2012	2013	2014
6.12	4.56	4.25	5.13	4.91	3.40

Source: Ministry of agriculture reports

Algeria still one of the world's largest powder milk importers. Much of domestic consumption comes from powdered milk, which is imported by the National Dairy Office and distributed to public and private dairies. Despite the rising price of milk on the international market, government subsidies maintain the price of milk at 25 Algerian dinars per liter. Due to consumer subsidies, the consumption of milk is very high compared to neighbouring countries: in 1991, annual per capita milk equivalent consumption of dairy products amounted to 116 L in Algeria, 53 L in Morocco, and 70 L in Tunisia, compared with World Health Organisation (WHO) recommendations of 90 L (5). The country's leading suppliers of milk powder are France, Belgium, New Zealand and USA.

Imports of powder milk have risen modestly in volume from 251000 tons in 2005 to 262000 in 2013. However, their value has nearly doubled from 494.7 million Euros in 2005 to 786.6 Euros in 2013 (6). A shortage of powder milk production in New Zealand caused powder milk prices to jump 45% in Algeria between November 2013 and March 2014 (7). According to Customs data, dairy imports in the first half of 2014 jumped by 88.2% to reach 757.2million Euros, up from 403.6 million Euros in the same period of 2013. We can say that Algeria is the second large importer of milk powder in the world with some 163000 tons imported in 2009 and the fourth largest importer of skim milk powder with some 95000 tons of imports (8).

We need to reduce expensive milk imports by increasing the production and collection of milk. Milk collection infrastructure consists on dairy collection co-operatives, which are generally a group of neighbouring farmers to collect milk. With a dairy policy relying on milk powder imports to secure the supply, the development of an efficient chain collecting raw milk has not been well established. The unfair competition with cheaper imported milk powder has not incited local operators to invest in the collection network. The collection is the main link between production and the dairy industry. But we note that despite the increase in raw milk production, which increased from 1.55 billion liters in 2000 to 2.18 billion liters in 2007, the collection

rate is very low- average rates 9%, table 3. The collection could not advance in continuing and meaningful way; it has undergone significant variations from year to year during the period 2000 – 2007.

Table n° 3. Evolution of quantities of milk collected
and the collection rate in Algeria 2000 - 2007

Year	Local production (10 ⁶ liters)	Raw milk collection (10 ⁶ liters)	Collection rate (%)
2000	1550	100	6.52
2001	1637	93	5.71
2002	1544	129	8.41
2003	1610	120	7.46
2004	1915	200	10.4
2005	2092	163	7.83
2006	2244	221	9.86
2007	2185	197	9.02

Source: Ministry of Agriculture and Rural Development 2007.

According to data collected from the Ministry of Agriculture regarding collection centers, these are listed in table 4, on the whole national territory in 2006:

Table 4. Classification of collecting areas in
Algeria in 2006

Indicators			
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	Zon e 1	Zon e 2	Zon e 3
Raw milk Collection (%)	6.50	3.01	0.50
Collection centers	57	27	16

Source: Ministry of Agriculture and Rural Development,

2008.

These collection centers, made in order to promote the collection of raw milk, are represented by relatively moderate numbers of zones; zone 1, it is the littoral and sublittoral with 57 collection centers; 27 collection centers are located in pastoral and agropastoral zone 2, and 16 collection centers are located on the Saharan territory zone 3. As it can be seen, the collection of raw milk has remained relatively low, thus the processing industry remains heavily dependent on imports. That can be explained by:

- ✓ The establishment of many small collectors network without adequate monitoring,
- ✓ Too late settlement of collecting premiums for deliveries to dairies profit with the administration quarrel at the payment counters,
- ✓ Benefits are granted by the use of imported milk powder,
- ✓ The dairies and breeders are not well articulated,
- ✓ Unfair competition from informal channels of distribution of raw milk and its derivatives.

The food crisis of 2007 and its effects on milk imports' bill has given rise to the National Interprofessional Milk Office (ONIL) as a regulation agency with the mission to organize the dairy sector. The main objective was to increase the rate of raw milk collection, it should reach 22.4% of the national production in 2011, but the rate did

not exceed an average of 13% whereas that rate is 65% in Morocco and 63% in Tunisia in 2010 (9). However, productivity still low, averaging 12 liters per head of cattle, and much of production is wasted through inefficient collection and processing methods. According to the FAO statistics in 2012 the rate of self-sufficient in dairy products is 49% in Algeria, 89% in Morocco, and 95% in Tunisia. We shall turn to analyse the weaknesses of the agricultural sector.

3 -Difficulties of agricultural sector

Despite significant investment in recent years, the agricultural sector remained stagnant for many years due to a variety of factors. There is a wide gap between domestic production and domestic demand, especially for basic products such as wheat and milk. The national economy still relies heavily on oil and gas, which provides more than a third of GDP, 70% of government revenue and 97% of exports. Algeria has been severely hit by a crash in international oil prices and a subsequent rise in the trade deficit. The persistence of low oil prices is a further factor contributing to risks, as the country is highly dependent on hydrocarbon revenues for providing subsidies and incentives to agriculture sector. This, in turn, is negatively impacting the sector's ability to attract the investment it needs for development. The drop in oil prices is also pulling down the country's economic performance. The IMF warned in 2014 that if Algeria does not reduce its reliance on oil revenue, it will not be able to support its spending targets and could become a net debtor within 20 years (10).

The agricultural sector is vulnerable to labour shortages, as local labour remains reluctant to enter agriculture due to the relative attractiveness of the manufacturing and services sectors as it is illustrated in table 5. The change in employment by sector between 2003 and 2011 shows a significant decrease of almost 10% points in agriculture. Nowadays there is a sharp decline in rural employment, while the population is ageing, and agriculture work is often underrated, and as a result it is deserted rural areas. Agriculture still provides the highest proportion of jobs and is a core sector in

rural areas. But the high rate of unemployment is to be explained, however, by the fact that there is very little diversification of activities, since these areas fail to benefit industrial activities and services that could develop there. Difficult farming conditions due to water shortage, price variations and climate uncertainty, market shortcomings are all factors that have pushed farmers to leave rural areas (11). From the economic point of view, agricultural migration results in loss of labour, thus contributing to a decrease in food production, and a high rate of land abandonment.

Table 5. Share of employment per economic sector, 2003 – 11 (%)

Economic sector	2003	2005	2007	2010	2011
Agriculture	21.13	17.16	16.05	11.67	10.77
Industry	12.03	13.16	10.62	13.73	13.72
Construction	11.97	15.07	13.99	19.37	16.62
Trade and services	32.58	35.36	36.46	55.23	58.89
Administration	22.29	19.25	22.88	--	--
Total	100	100	100	100	100

Source: ONS, Labour Force Survey.

What is more, the government does not always provide economic support for this sector, it has benefited little from the modernisation.

Under the National Agricultural Development Program (PNDA), government support to the agricultural sector is approximately 3% of the total value of agricultural production to investment. However, this rate remains very low in relation to other countries, representing an estimated investment of 66 Euros per ha/year (12). Furthermore, Algeria cereal production remains vulnerable to weather conditions. The rainfall is inconsistent throughout the season and weather conditions can vary dramatically from year to year. However, high-efficiency irrigation technology is not widespread and a large part of these irrigation networks have outdated equipment and inadequate maintenance. The development of irrigation and water resources remains an important priority, currently only 12% of the arable land is irrigated. The Arab countries will be most affected by climate change and extreme meteorological phenomena in the forthcoming years, inevitably burden their agricultural production and wheat harvests (13). In recent research, the Institute of Development Studies and Oxfam have envisaged food price increases fluctuating between 20 and 60% by 2050 due to a reduction in yields connected to climate changes (14). Recent climate studies have also projected that with temperature increases of 3° C by mid-century, yields of key cereals could decline 20 to 55% in some parts of MENA unless agriculture is adapted to new conditions (15).

The greatest threat to agriculture soils is urbanisation. Soil degradation results from a multiplicity of causes; fertile agricultural soils have been diverted to other uses such as an anarchic development of construction and roads. Over a total of 350 000 ha treated the DRS (Defense and Restoration of Soils) in Algeria, 60% were found to be degraded, 20% had disappeared (16). Another problem for farmers is the difficulty in getting loans, banks in general refuse giving loans to farmers who do not hold land titles, and must own at least 10 ha while 60% of Algerian farmland is small private holdings no bigger than 5 ha (17). Land tenure is insecure in many areas, making rural population vulnerable to “land grabs”. The agricultural production has been hampered by insufficient access to input such as poor seed quality, high cost of pesticides, and low quantity of fertilizer. World

Bank statistics show that Algeria used an average of 12.7 kg of fertilizer per ha of arable land between 2009 and 2013, well below the average of 39.1 kg per ha in Morocco and 40.4 kg in Tunisia in the same period (18).

Feed constitutes the major cost of livestock operations, local feed production is limited and costly. Feed production is mostly rainfed, with low productivity. What else, the use of cereal straws and poor roughages as the principal cattle feeding systems in dry seasons may also decrease significantly milk yield. In fact, these feeding resources cannot sustain the feeding requirements of high genetic merit cows. Farmers are not aware of the techniques of dietary rations and they often ignore cattle requirements. Agriculture often suffers from a lack of knowledge and qualified employees, especially where quality and management are concerned. “A nation with high productivity requires an educated workforce that possesses the skills, knowledge and talent to help the economy diversity and growth”(19). Appropriate education systems help to prepare the future workforce for the needs of agricultural sector.

The cost of milk production varies greatly depending on factors including labour costs, animal genetics, on-farm technology, and water availability. Milk production is produced in both the traditional and modern sectors. Traditional producers rely on crop residues to feed their animals; most of their milk production is not available for trade because of the distance (far away) and the weak marketing facilities and services. In addition, they largely depend on milk for food and mainly raise cattle for meat production. The modern sector is specialised in producing milk, but it fails to meet the growing consumption requirements owing to its weak performance which is reflected in low production. The main constraints are presented briefly as follows:

- The milk sector is totally dependent on traditional producers and natural pastures.

- The absence of milk collection centers and sometimes the inappropriateness of such centers is a key determinant for milk production, processing and trade
- The lack of necessary infrastructure such as roads, means of transportation, communications and refrigeration warehouses.
- Farmers may pay attention to the size of their herd more than to the breed, which was caused the depletion of natural resources and contributed to desertification and low productivity.
- Inadequate delivery of veterinary services prevents improvement in animal health.
- Deficient livestock management practices which have resulted in productivity declines. Also agricultural services (research, extension, and other production support services) are inadequate to support small and geographical dispersed farms.

4- Conclusion

Algeria became one of the world's largest food importers. This was caused by the country's reliance on hydrocarbon sector, which has led to a lack of diversification that has exposed the national economy to oil prices chocks. Following the oil price drop, the Algerian government implemented measures to reduce imports. Unfortunately, several factors have hampered the agricultural production, including weather conditions, lack of investment, insufficient access to input, and low level of agricultural training. Thus, it will continue to import food as long as domestic production doesn't meet the demand. Food will always be a fundamental issue, because it is at the core of human activity. Therefore, the government should make agriculture a priority to boost domestic production to reduce its rising import bill and end the country's reliance on imported food.

Combined with high input costs, poor infrastructure and difficult meteorological conditions, the agricultural sector requires further efforts and support from the government. The agriculture problem should be well handled by the government, which is well aware of the

sensitivity of the matter (payments in foreign currency are more and more heavy for public budget). We hope that the government has become aware of the tremendous vulnerability caused by reliance on imported food to meet domestic demand. It should reorient its economic policy toward greater levels of domestic food production in attempt to replace its political control over food supply through the diversification policy of the national economy.

The challenge facing Algerian agriculture is becoming complex. The agricultural development strategy must attempt to eliminate the weaknesses and must implement development priorities for improving agricultural production. If not corrective measures will be undertaken, this will result in the increased dependence on food imports. According to the actual state and fundamental importance of this sector we could address the following solutions:

- Improving the quality of the rural environment, this will help keep more people on the land,
- The distribution of formal land titles allows small-scale farmers greater access to credit and banking facilities. Thus, facilitate the purchase of agricultural inputs, equipment and other means of production,
- Resolving irrigation issues caused by drought and irregular rainfall through the construction of more dams,
- The improvement of management and monitoring policies for food safety in order to insure food of sufficient diversity and safety to promote good health,
- The development of pilot partnerships between national farmers and foreigners to enhance production and competitiveness throughout the production and across the product range,
- Supporting of small producers by providing them with soft loans.

Long-term economic challenges include diversifying the economy away from the reliance on hydrocarbon exports, giving great support

to the private sector, and attracting foreign investment. Algeria is in need to accelerate structural reforms to diversify the economy and promote new sources of sustainable growth. The agricultural sector is a high generator of employment in rural areas, largely through small and medium-sized enterprises. The Algerian government should pay attention to agricultural and tourism sectors. It is increasingly evident that these sectors can be actively become as a contributory factor of economic development for Algeria.

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