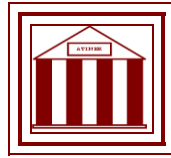


**Athens Institute for Education and Research
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**Towards a Viable Food Security
Policy in Algeria**

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Towards a Viable Food Security Policy in Algeria

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Abstract

Food security is becoming a major challenge for policy makers in developing and developed economies alike. This paper focuses on the challenges Algerian policy makers face and provides a comparative study between Algeria and two of its immediate neighbours. The paper begins with some of the main definitions of food security and the sovereignty concepts. It then explains why food security is a major issue for the country, and traces back the evolution of the food situation in Algeria since the sixties. The Algerian case is contrasted with Morocco and Tunisia, which share very similar socio-economic as well as geographic features. One major contribution of this paper is the identification of a number of areas in the Algerian agricultural policy that would help improve food security. The paper concludes with some recommendations.

Keywords: Algeria, agricultural policy, food security

Introduction

Food security is becoming a major issue throughout the world. Growing populations with its associated growing demand for food have come at a time where competition for land and water has become fierce (Godfray et al. 2010). The effects of climate change are perhaps the biggest threat to the future of food security. Algeria is particularly prone to the above challenges. The population is growing fast; demand for food has grown significantly in the last decade thanks to abundant oil revenues. Yet fertile land is limited and possibly shrinking because of desertification, while droughts are becoming more and more common. The situation of food security in Algeria is therefore particularly interesting, especially given that the country has two neighbouring countries, Morocco and Tunisia, which are very similar to Algeria except that they have no significant oil revenues. These two countries can therefore serve as a benchmark for Algeria, in the sense of how Algeria copes in terms of its own food security without oil revenues.

The main aims of this paper will be to define food security and food sovereignty, and identify the key policy issues for agricultural decision makers in Algeria.

Some Definitions

Before discussing the various aspects of food security in Algeria and its neighbouring countries, it should be beneficial to review the main concepts and definitions employed in the literature. The most common concepts and notions are: food security, food self-sufficiency, and food sovereignty.

In its narrowest sense, food security means “that enough food is available, whether at a global, national, community, or household level” (Pinstrup-Andersen 2009: 5).

At the World Food Summit organized by FAO in 1996 a consensus was reached on the definition of food security. According to this consensus food security “exists when all people, at all times, have economic, social and physical access to sufficient, safe and nutritious food that meets their dietary needs and food preferences to enable them to lead an active and healthy life.”

As noted by FAO (2006), food security implies four basic facts: (i) Availability of foods “in sufficient quantity and of appropriate quality”. This availability results either from domestic production and/or imports. (ii) Access to food for all inhabitants of a country. Such access can be achieved by various means (purchase, self-production, food aid). (iii) Use of food “through an adequate diet, clean water, sanitation and health care to obtain a state of nutritional well-being where all physiological needs are met. This brings out the role of non-food inputs in food security.” (iv) The stability of access to food. That is to say the permanence of this access (no break in supply, whatever the cause of the possible break).

It must be emphasized that food security does not mean food self-sufficiency. Self-sufficiency means that food comes only from local

production. Note also that the definition given by the FAO says nothing about where the food ensuring food security comes from. These foods can come from either local production or imports. The FAO does not reject the dogma of liberalization of agricultural trade. It is against this “ambiguity” that a number of NGOs have protested at the World Food Summit in 1996. The protestors emphasized the concept of “food sovereignty”, as a complement to the concept of food security. Invented in 1996 by Via Campesina (international movement of small and middle peasants) and adopted by the NGO Forum (FAO 1996), this concept advocates the right of a country to protect its agriculture against competition from foreign agricultural products at low prices; a competition which harms local producers (who have higher production costs) (Decarsin 2012). For example, even if a country is not afraid to run out of foreign exchange to ensure food security, it is better to try, for this country, to be as self sufficient as possible.

Food sovereignty implies rejecting full liberalization of agricultural trade and rejecting thus accession to the WTO, because the WTO is trying to implement the current organization of agricultural markets worldwide.

The Importance of Food Security

Food security is a major issue because, basically, it determines the level and pace of the overall development of a country. A food secure population means that the available workforce is healthy and therefore can achieve a good level of productivity. Food security also means that absolute poverty (the situation in which an individual is unable to meet his basic needs) has been defeated and that, consequently, citizens have a purchasing power that enables them to acquire minimum industrial goods and services to support the development of all economic sectors.

Food security is a major issue especially if it relies primarily on local food production. Indeed, the local production of food allows on the one hand to allocate more resources in foreign currency for the import of capital goods, raw materials and semi products needed for development, and on the other hand to strengthen the capacity of the international negotiation of a country. A country that begs for its food has a much weaker “bargaining power” than a food secure country.

The Evolution of the Food Situation in Algeria

Although the available data are not highly reliable, one can say that on average, the situation in Algeria has improved markedly over the past half century, both quantitatively and qualitatively.

Quantitatively, the food ration per capita - expressed in calories - almost doubled between the sixties and years two thousand (see Table 1). With 3112 Kcal, it is slightly less than that of France (3524 Kcal) or Spain (3183 Kcal) in 2011. In qualitative terms, the progress has been even greater. The total protein

ration almost doubled (see Table 2) and animal protein ration has almost tripled (see Table 3). However, for animal protein, Algeria is still far from the average ration in 2011 in France (71 g / head / day against 22.8 g / head / day in Algeria) and Spain (65.2 g / head / day).

Note that the comparison with Morocco and Tunisia shows that the Algerian, on average, is a little less well fed than the Moroccan and Tunisian. The average Algerian consumes slightly less calories and less protein, with animal protein proportion being very similar in the three countries.

Table 1. *Evolution of Food Supply in the Maghreb Countries*

	Average years		Multiplying factor
	1963-1967	2007-2011	
Food supply in Kcal / person / day			
Algeria	1 685	3 112	1.8
Tunisia	2 260	3 317	1.5
Morocco	2 238	3 285	1.5
Food availability protein g / person / day			
Algeria	44	86	1.9
Tunisia	58	95	1.6
Morocco	60	96	1.6
Food availability in fat g / person / day			
Algeria	31	69	2.2
Morocco	35	65	1.9
Tunisia	58	88	1.5

Source: Calculations based on figures from the FAO database

Table 2. *Ration of Vegetable and Animal Protein per Capita per Day*

	Average 1963-1967	Average 2007-2011	Multiplying factor
Algeria			
Total Protein	41.44	85.92	2.1
Vegetable products	33.62	63.14	1.9
Animal products	7.82	22.8	2.9
Morocco			
Total Protein	56.72	92.34	1.6
Vegetable products	47.92	70.44	1.5
Animal products	8.78	21.94	2.5
Tunisia			
Total Protein	60.52	95.24	1.6
Vegetable products	49.08	69.4	1.4
Animal products	11.42	25.84	2.3

Source: Calculations based on figures from the FAO database

Table 3. *Evolution and Share of Animal Protein in Total Protein*

	Multiplying factor between 1963-1967 and 2007-2011	Share in the average ration 1963-1967	Share in the average ration 2007-2011
Algeria	2.9	19%	27%
Morocco	2.5	15%	24%
Tunisia	2.3	19%	27%

Source: Calculations based on figures from the FAO database

These good performances concern the average Algerian. They do not, however, provide a full account of the Algerian food situation. In 2011, according to the FAO, 5.1% of the population were in a state of undernourishment; 32% of children under five were anaemic; 15.9% of these children were stunted; 15.7% deficient in vitamin A; while 17.5% of adults were obese (FAO 2012).

It must be emphasized that the improvement noted was achieved thanks to a sharp rise in food imports, an increase not compensated by a significant increase in agricultural exports. In fact, the calculations made by the FAO data show that Algeria imported, on an average over the period of 1963-1967 and 2007-2011, 32% and 84% of consumed calories respectively. The share of imports in the availability of wheat has more than doubled on annual average between the 1963-1967 and 2006-2010 periods, those of total cereals was 2.6 times, that of pulses by a factor of nearly 8, those of milk 2.6, that of oil by almost 2. Only for meat, this share has remained constant and for potatoes this share fell to be almost zero by 2011. The dependence of the country has worsened so dramatically over the last half century, thus slowing the overall economic development. In 2011, food imports represented 20.8% of the total imports in value, which is the second biggest item in expenditure after “machinery and transport” (37.2%).

In conclusion, we can say that Algeria has very markedly improved its overall food security in the last half century. But this has been possible thanks to the oil boom. What will happen when it will dry up? This is one of the main challenges for the future.

Policy Consideration for Improving Food Security

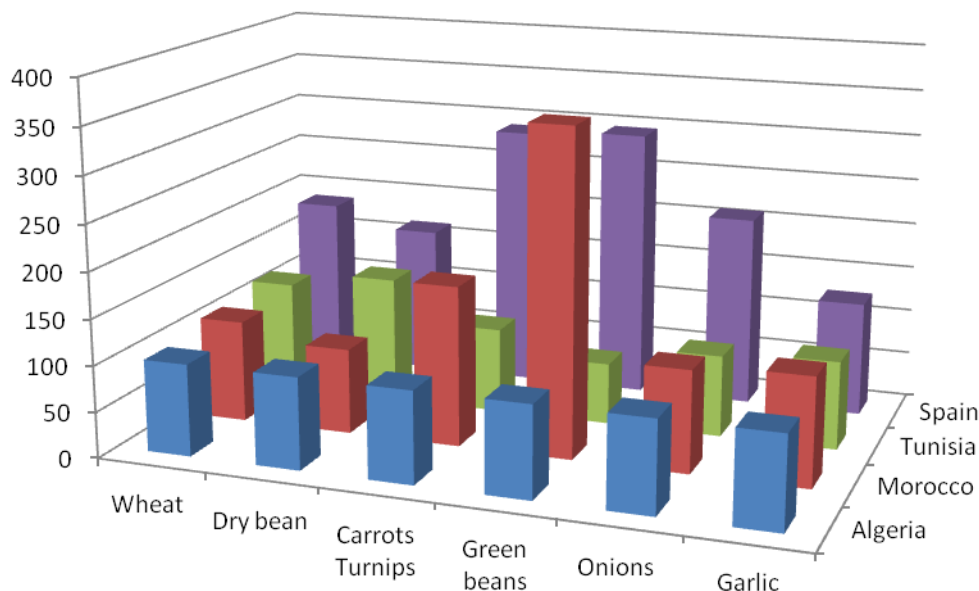
Policies tackling food security are faced with two conflicting realities. On the one hand, a country, in order to safeguard its independence, needs to self produce at least a minimum level of food production to its population. On the other hand that self sufficiency is unrealistic economically for climatic and other natural reasons. The question then arises as to what minimum amount of food should be produced locally? In other words, what level of food security should we aim to achieve? More importantly, below what level would our food sovereignty be threatened? This is a question that has not been asked until now. Answering such a question entails highly political choices -- choices which would require a debate within society.

Until this debate takes place, one can venture to say that Algeria is still far from achieving all of its agricultural potential. Thus, significant progress can be made to increase the level of food safety while remaining competitive within the world market. For example, the yields of many cultures - especially those irrigated - are still low compared to what is achieved in other countries with nearly similar weather conditions, as shown in Figures 1 and 2.

A well-prepared and well-executed agricultural policy should facilitate the increase in yields. From upstream to downstream of the agricultural sector, many policies implemented so far have shortcomings and therefore merit reconsideration. We will examine a few.

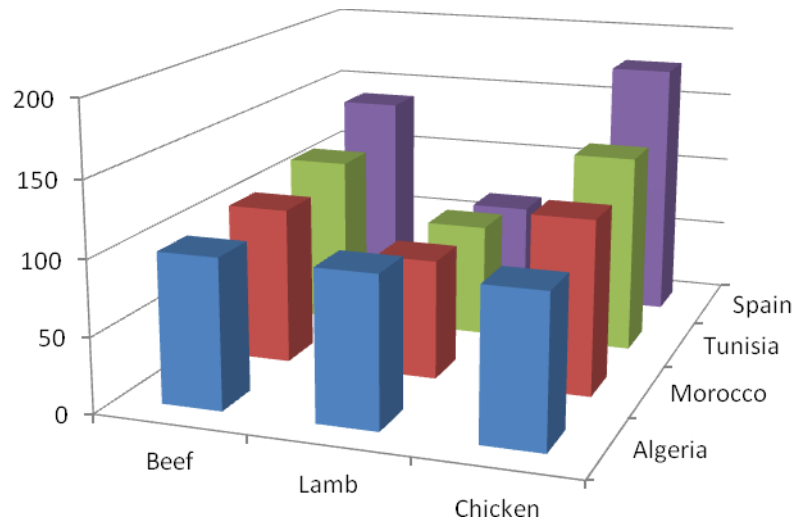
Let us start with the policy of scientific and technological research in the field of agriculture and food, which is vital for the present and the future of agriculture. This policy could be improved at least on four respects:

Figure 1. *Relative Yields of Selected Crops (Algeria = 100)*



NB. The indices are calculated on the average yields of five years (2007-2011)
 Source: Calculations based on figures from the FAO database.

Figure 2. *Relative Yields of Selected Meat Produce (Algeria = 100)*



NB. The indices are calculated on the average yields of five years (2007-2011)
 Source: Calculations based on figures from the FAO database.

- Increase in the balancing of the human and material resources.
- Encourage the Ministry of Agriculture to integrate university and college researchers into its policy. So far the ministry has neglected the potential contribution that these researchers can make in increasing the efficiency, management, and innovation of Algerian farming.
- Given the necessarily limited resources, focus research on priority targets and measurable objectives.
- Start vigorous research in the field of genetic engineering, research that will be decisive for the future in agriculture and food.

The policy of training and development prepares workers to improve their productivity and the productivity of the land. The training policy for the agricultural sector has privileged the quantity but neglected the quality of the trainees. At all levels, training has often provided - until now - a labour force who have acquired theoretical but little practical knowledge. This is mainly caused by mostly unqualified instructors to which a small incentive for self training to improve their knowledge is added.

The agricultural regeneration policy (Ministry of Agriculture 2009) - which is nevertheless important because it acts directly on farmers - has had little success if one believes the low budget allocated to it in the budgets of the Ministry of Agriculture. The regeneration has only affected a limited number of farmers because of the poor training of the regeneration workers, their frequent lack of experience, the lack of available resources and the critical lack of objective assessment of their activities.

Land policy has long been hesitant and long marked by a legal and administrative void. The government has never set out clearly the farm type it intended to promote (“patronal family farm” or “family farming enterprise” for example). The state has not been able to provide security and stability to

farmers, especially in the state-owned (agricultural) sector. Much of the farming land remains untitled, and much of this remains in undivided ownership. This has clearly hindered the promotion investment in agriculture. The status of rangeland, also, does not promote sustainable use.

The government policy on agricultural inputs and equipment should normally encourage local production and the use of “productive assets”. Yet in this field, local production remains minimal both in agricultural equipment (e.g. planters and potato harvesters, seeders for direct seeding, tractors, combine harvesters, and equipment for irrigation), seeds (potatoes seed production, for example, never really took off), in fruit trees, and even fertilizer despite the existence of a local fertilizer industry. Heifers are imported at great cost only to finish in premature slaughter despite their productive potential. The input “water” has seen wider use, but its economic use was not sufficiently encouraged. Given that water is produced at a high cost through desalination, the country would gain by subsidizing 100% the same drip irrigation systems.

The agricultural financing policy is an essential source to get an idea of the efforts made by the State in favour of agriculture and therefore its desire to reduce food dependency. Public funding concerns public infrastructure for agriculture, the operations of agricultural administration, and subsidies granted to farmers and some public and private enterprises (especially in the food industry). The observed opacity surrounding the actual expenditure and the recipients of this funding suggests that its use is both inefficient and ineffective. In addition, it is estimated that the financial resources allocated by the state to agriculture have always been relatively small compared to the economic and social importance of the sector and especially in relation to the considerable risks taken by farmers to produce the food of the population. Fortunately, that modesty of the state's effort in funding is somewhat offset by the exemption of tax on income which has always benefited farmers.

The policy of the producer price only concerns the production of cereals, dairy milk and industrial tomato whose prices are supported. However, it begs the question of whether it is desirable and reasonable - from the perspective of economic development - to maintain such low consumer prices for bread and milk. Yet there is ample evidence that this benefits wealthy households' more than poor households.

The agricultural bank financing is also found wanting. We know that a modern economy can develop only thanks to bank credit. This credit has always been marginal despite the subsidized interest rate by the state. The loans offered by banks to farmers have always been insignificant and continue to be so. The authorities have failed to design and implement effective procedures in the field to meet the needs of both banks and farmers.

The agricultural marketing policy must strive to organize the agricultural markets to make them as transparent as possible in the interests of both producers and consumers. It is clear that, despite the expenditure of the state for the realization of wholesale fruit and vegetable markets, they continue to operate on non-competitive bases. As for livestock markets, no action has ever been taken by the authorities to make them transparent. This lack of market control by public authorities - whose role is nevertheless to ensure the

competitive functioning of markets – has allowed wholesale traders to often capture an exorbitant share of the value of agricultural products, leaving producers with insufficient margins to meet their consumption needs and renew their means of production.

The foreign trade policy on agriculture and food trade has been relatively protective of Algerian producers through appropriate tariffs. However, for wheat, corn, milk and pure-breed breeding animals the import tariffs have been set very low. Consequently, producers of these goods are disadvantaged and, price guarantees by the state, have been too limited to counter the negative impact of foreign competition on domestic production.

Conclusion

The last two decades have seen sharp food price increases, which in turn have drawn much attention from the world's policy-makers and news media on food security. Policy makers in Algeria are well aware of this strategic risk. Yet, they seem to have been so far incapable of setting a viable policy or road map to tackle this long term problem. Although both food consumption and production have seen improvements both quantitatively and qualitatively, it was argued in this paper that this apparent success is mostly due to heavy subsidies made possible by a decade of increasing oil prices. Given the recent dramatic fall in oil prices, the government needs to be concerned with focusing on the qualitative aspects of its food security policy. Of these, the following three aspects are fundamental to the success of any food security policy.

The first point concerns the decisive importance of the agricultural administration in the design and implementation of agricultural policies. A good agricultural policy can only succeed if applied by honest and competent officials. Unfortunately, if there are many competent officials, those officials are rarely in positions of responsibility. Moreover, they are only weakly motivated to effectively carry out the work entrusted to them. For example, why is there a lack of a reliable database on agriculture (areas, livestock, yields, supplies, labour, ...) despite the overstaffing of agricultural administration? Evaluation of effective agricultural and rural policies depends on a correct assessment of the situation, the existence of a dashboard available to agricultural officials that gives them the indicators of their sector's performance at times donated or given periods.

The second point concerns the fact that food security is inseparable from the overall economic development. The issue of food security is not confined to the agricultural sector but to the whole economy. If the country wants a prosperous agriculture that contributes to better food security and food sovereignty, it must also have an industry, services and sources of funding that best meet the needs of agriculture, farmers and rural areas. Without a sufficiently integrated national economy, there can be no security or sustainable food sovereignty. We cannot ask the agricultural sector to be effective if other sectors do not follow.

The final point that needs to be emphasized is that the objective, periodic and regular evaluation of the policies is an essential condition of good governance of the agricultural sector (or any other sector). Knowing in time the level of achievement of the objectives and costs is very useful for the proper management of public resources. This assessment is only possible if the policy sets clear and measurable objectives. However, this has almost never been the case in Algeria. The objectives of agricultural policies and their costs are not clearly advertised before they are implemented. At the end of the implementation of a policy, officials rarely questioned the efficacy (how well the objectives have been achieved) and the efficiency of these actions (objectives have they been achieved at lower cost?). Of course, food security is achieved through greater local food production, but it is reached more easily when the country's financial resources are properly used. Wasting foreign exchange resources, in this sense, leads to decreasing the country's capacity to ensure a sustainable way for its food security.

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