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Paper entitled: Cereal Production in Algeria, Between Sustainable Food Security and Desirable Durability

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Abstract

The discussion on cereals in Algeria, both in terms of production, consumption, and in terms of objectives and strategies, takes on fairly significant dimensions in the current context, The agricultural sector in this country is resolutely concentrated and focused on this type of production, and this has been going on since the post-independence period, through numerous projects assigned to objectives of development of cereal production, setting the regions that adapt more to this type of production and can contribute well. In this context, this paper attempts to return to convincing arguments to analyze the place of cereal production in the question of food security and that of knowing the nature and form of the cereal sector, in a balanced and economic situation between international trade, economic and political conflicts that are shaking the world, add to that the emblematic and critical issue of global warming. Through conceptual study, punctuated by another more analytical and rather quantified, we will try to analyze the reality of cereal production in this country, widely known for the entire dependence of its economy on the hydrocarbons sector and the absence of economic diversification, in order to deduce some converging remarks and avenues for scientific reflection. The results show a logical conclusion that cereal market in Algeria will still the focus for many years due to the fundamental question of food security.

Keywords: Cereals; Algeria; Production; Consumption; Markets; Food security; Sustainability

Some readings and summary approaches to the cereals market

It seems to us that it would take too long to discuss the importance of cereals in human and animal food and that for ages and that it is necessary to examine more the state of play of cereals markets in the world, in a concern to unearth and know the main factors that are involved and that play a crucial role, both in terms of supply and demand, as well as the other stakeholders in the supply chain. According to a magazine , it is quoted "We call cereals plants with ear(s) producing seeds which are harvested at maturity and which, once transformed into flour for the majority, serve as a basis for human or animal food. », listing a set of products related to this culture, among others: soft wheat, durum wheat, oats, rice, sorghum, rye, millet, panis, and many others, which place them among the most important foodstuffs consumed and appreciated by consumers at market level. This preference for cereal products is explained by consumption patterns that have turned towards this type of production, for their content, their simplicity in consumption and above all the availability at the market level (with a production commensurate with the demand expressed), even though the eras and antecedent periods (as was the case with the Roman Empire, Egyptian, Asian, and others), which propel them to the top of the products consumed in the world.

Obviously, this popular enthusiasm for cereals has led to an upsurge and multiplication of markets at the international level, creating, as a result, a certain monopoly by the producing States which have seized the advantages and profits, sometimes well beyond of their hopes, consequence of a still exponential international demand and a limited and concentrated supply on just a few countries well advantaged by the climatic and natural conditions, taking into account some changes at the level of international markets. According to certain cross-checked and collected data , we know that the cereals market is distinguished by its importance on the various products (in particular soft and durum wheat) where it is estimated that each year "about 25% of world wheat production and 15 % of that of maize is exchanged between the exporting countries (including France and Europe) and the importing nations", which explains all this focus on the consequences of this war between these two countries (Ukraine and Russia), which weighed heavily on prices, especially for importing countries whose incomes are very limited and vulnerable.

In the same source, it is clearly notified that it is surprising to note that despite, sometimes, quite significant productions on the international markets, the volume of trade cannot keep up with this rate, as it is well underlined that “the volumes traded represent less than 20% of world production. Thus, a small variation in world production can have a significant impact on international trade. As producing countries give priority to supplying their domestic markets, any drop in their production will automatically lead to a drop in exportable quantities”, as was the case with India, which preferred to supply domestic markets with rice, in a way to protect domestic consumers from import inflation and to gurarantee social stability and peace.

This clearly informs us of the fact that international grain markets are characterized by a certain feverishness and instability due to a few parameters and factors that are difficult to control or manipulate, in particular climatic and naturals, in addition to others such as conflicts between producer and consumer countries and the emergence of economic, financial and trade crises. It is also clear that the stakes on cereal products have become crucial and emblematic, as long as food cannot be the subject of discussions and differences between the States, because it is still a highly strategic product, for human and animal life, surpassing even other products and strategic assets such as fossil, financial and other products.

Thus, and according to the same source, it is quoted that “World cereal production is expected to increase by 367 Mt – to reach 3,053 Mt in 2028 – mainly due to increased yields. The strongest increase would be recorded by maize (+181 Mt), then wheat (+86 Mt), rice (+66 Mt) and coarse grains (+35 Mt)”, and that “World consumption of cereals is expected to show an increase of 382 Mt between the reference period and 2028, reaching 3,036.0 Mt in 2028”, and that finally, “By 2028, world cereal trade is expected to grow by 76 Mt to reach 503 Mt The Russian Federation is coming to the forefront of the international scene and has become the leading wheat exporter in recent years, supplanting the European Union in the first place in 2016”, which requires a very objective and relevant analysis and study to detect the main elements of analysis and better understand the evolutions and trends of this type of market.

In its latest report, the world organization states that “FAO’s forecast for world wheat production in 2023, slightly raised from the first estimate in March, now stands at 786 million tonnes, which would represent the second highest result ever recorded, and a figure only 1.3 percent lower than that of 2022”, thus denoting that this type of market is developing in a unpredictable and unexpected way for economic operators, since no obeying only much more complicated and elusive parameters, too often linked to economic strategies and visions specific to each State according to the advantages and opportunities that arise on the level of international markets. It is also necessary to highlight the consequences of the battles for leadership in this type of production between the large producers (but also consumers) like Russia, Ukraine, the European Union, the CAIRNS cartel, and other countries that are in line with the main producing countries, given the intensity that revolves around cereal products that seem to take the lead over other products and confirm their place and presence on the international scene.

In our concern to properly analyze this question of cereals market, more particularly at the level of the contemporary economic context, it seems more reasonable and logical to us to put forward the main arguments in favor of this priority of negotiators towards this type of market, perhaps for obvious reasons of food and human and animal nutrition, but also probably for factors related to geopolitics and geoeconomics, given the dimensions developed in international trade. In the opinion of specialists and experts on this point, the international cereals market is developing at a rate and an evolution which puts more pressure on producing countries, since consumption seems to expand and grow with the economic events, in particular the improvements observed in the living conditions of populations, especially in emerging and developing countries which devote a fairly large part of their income to food consumption.

From another angle of clarification, Herbier CL [1] informs us that “Historically, the market shares of the five major exporters (United States, European Union, Canada, Australia and Argentina) represented nearly 90% of the total. But since the beginning of the 2000s, the arrival of the Black Sea countries (Russia, Ukraine, Kazakhstan) has upset the situation. The five traditional exporters have lost 20% of market share in 10 years”, which largely replaces the debates on this type of market and possibly the emergence of other producing countries (notably emerging economies) which may challenge the hierarchy observed until the establishment of a new international reconfiguration on the subject of trade food in the world.

In another interesting strong reference, it is quoted that “since mid-2010, high international prices for agricultural commodities raised fears of a repeat of the food price crisis of 2007–2008. Globally, the 2010–2011 price shock pushed 44 million people into poverty, with 68 million net food consumers falling below the poverty line and 24 million net producers lifted out of poverty thanks to higher food prices (World Bank 2011a), thus sounding like another warning about the consequences of imbalances in cereal markets (and in particular wheat), as long as producers and consumers do not seem to meet the same criteria and standards for convergence and synergy, a logical consequence of political, diplomatic and above all military conflicts between players, with a noticeable and worrying inertia of international institutions, such as the WTO and the FAO who seem to take the hit without intervening too much.

The cereals market in Algeria: State of play

Discussing the place of this type of market in this country is one of the main concerns and apprehensions of economic

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decision-makers and also a very adequate and appropriate theme, since Algeria is one of the most wheat-importing countries (and all of other cereal products), which triggers a series of worries and fears at the level of national economy who wants to get rid of this cereal dependence, at a time when the international context hardly pleads for such a dependence, regarding the rapid and dazzling changes in the prices of these products on the international markets, causing, consequently, a certain damage and financial abyss that is difficult to manage for the public treasury.

Let's leave room for a few literary and conceptual approaches to this theme

At first, Medjiden HK, Bouchafaa B [2] indicates that "The cereal and derivatives sector constitutes one of the important bases of the agro-food industry in Algeria. Importance which results, in particular, from the preponderant place occupied by cereals and their derivatives in human food, in particular semolina (couscous and pasta) and flour (bread), as well as in animal feed (brans and low flours)", and this has been going on since practically the colonial and post-colonial era, despite all the attempts made to change this mode of production and consumption and to ensure a certain national sovereignty. For his part, Bessaoud O [3] informs us that "cereal production occupies nearly 40% of the UAA and that durum wheat occupies an important place, and nearly 600,000 farmers are versed in this type of production (60% of all farmers at the national level)", with a clarification that this type of production is very variable with climatic and natural changes in the country, in recent times, more detrimental and harmful on the level of production. In the same subject, Bekkis S, Benmehaia MA, Kaci A [4] indicate that "According to available products, cereals occupy first place in the food budget of Algerian households (17.5% of total food expenditure). Also, the budgetary share of cereal products is about 20% in rural areas", which explains all this importance on the need to replace the debate on the cereal market in Algeria in its most analytical framework possible and the most scientific representative to begin a study commensurate with the value of this market and this production. For this matter, it seems to us more fair and appropriate to begin this discussion according to the three essential components of any market, namely: Production, consumption and foreign trade.

Cereal production: It should be noted that this production has evolved according to climatic conditions and natural variations, because cereals are known for their links with types of natural factors more adapted to this culture and the requirements required for such production.

Thus, and according to Chabane M, Boussard JM [5], "Since 2000, the availability of cereals has experienced a relative improvement. Growth linked in particular to a strong increase in added value in the wheat sector (30% per year according to MADR data, 2006). Despite the significant upturns in production levels and the performances obtained thanks to the revitalization of the agricultural sector after the application of the various agricultural support programs (PNDA and PNDAR) as well as the promotion of very remunerative prices for cereals, the local production is still lacking and presents characteristics of extreme variability in volume from one year to another", thus showing all the vulnerability and fragility of this production, sometimes despite good climatic conditions.

According to the statements of the ministry, it is quoted that "The national production of cereals which will be collected in 2021/2022 should be between 27 and 30 million quintals, which will allow Algeria to reduce its cereal imports by 25%", but this remains, once again, insufficient to satisfy local demand and respond to the numerous requests in terms of human and animal food. In another source , it is noted that "In Algeria, the wheat harvest is expected to stand at 3.3 million tonnes in 2022/2023 while the expected volume would mark an increase of 38% compared to the stock of 2 .4 million tonnes harvested during the previous campaign even though the sown area should stagnate at 2 million hectares, but despite these prospects, the country is still far from its production peak of 4 million tonnes of wheat reached in 2018/2019", another way of reconfirming the fears aroused and raised by experts on the worrying and unforeseen fluctuations of this production, which may result to disastrous and dramatic consequences for the public treasury in the event of a terrible fall in the production, which means the preparation of a fairly substantial financial slate, especially in the event of another drop in the price of a barrel, the main breath of fresh air for the national economy.

Along the same lines, Sahali N [6] & Sahali N [7]indicates that "in terms of agricultural policy, it (grain farming) is placed at the center of concerns of public authorities, which has resulted in multiple financing: (through banks and public funding), favoring intensive production", and also that "these efforts are materialized by several measures in favor of cereal farmers such as supplier credits for the acquisition of seeds, fertilizers and phytosanitary products. In addition, other measures are applied like interest-free campaign credits which have been introduced since 2010 called "Rfig", fertilizers are subsidized up to 20%, VAT exemption for phytosanitary products and the availability of seeds certified…", revealing, in passing, a lively and well-displayed involvement of the authorities through the PNDA and PNDRA. Of course, we have to admit that such sudden resurgence of interest finds its explanation in a certain awareness of the State on the need to promote a decisive and hard-hitting strategy at the level of cereal production, as long as the crucial and burning questions of food security and the food sovereignty also remain a concern and depend solely on revenues from the hydrocarbons sector, rather precarious situation in the contemporary context dominated by strong battle between international matkets, mainly cereal and raw materials ones, greatly amplified since the the Corona epidemic and international economic conflits raised recently by some countries (USA, China, Russia, emerging states and other).

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We will be particularly interested in the approaches of Sabrina AK [8], in here presentation of the problem, namely that “The production systems and crop rotations typical of large-scale cereal farming in Algeria are mainly articulated around fallow / / Cereal farming / Breeding or Cereal farming / Fallow. The system of agricultural practices implemented for quite a long time, extensive, reduces soil fertility and precarious agro-economic systems”, which reinforces some reservations established and raised by experts on the chances of cereal production which could contribute, actively, in satisfying the objectives of the State, which have multiplied for some time and focus more on the availability of cereal products (durum wheat, soft wheat, oats, barley, rice and others), both at the level of the production and the level of foreign trade where Algeria is counting on future exports and changing the situation from an importing state to a more exporting one. This reference arsenal enables us to conclude that, of course, cereal production has clearly improved and progressed in recent decades, particularly during the launch of the PNDA and PNDRA programs, fruit of a certain financial euphoria at certain time, but it remains that this stays limited and insufficient for achieving food security and independence from external markets, for many reasons : a) the consumer market is becoming more demanding and greedy, b) risks of climatic aggravation, c) land suitable for this type of production not fully acquired and developed, and above all a financial risk which could hamper the pursuit of the cereals development policy in Algeria.

Cereal consumption: The food consumption market in Algeria is considered to be the most reputable and recognized market in terms of quantities of cereals consumed (particularly durum and soft wheat), due to the fact that the mode of domestic consumption is largely oriented and directed towards these products, probably a consequence of the colonial period and the deprivation of the population of more substantial products, like meat, fish, agricultural products and others, knowing that a majority of the population are modestly remunerated in order to consume more healthy products regarding their prices in the markets.

Thus, Mahmoud B, Sidali R, Zoheir A [9] inform us that “the Algerians give a preponderant place to the groups of cereals and derivatives in their diet, headed by durum wheat, which is the most important food speculation for a large share of the population and remains a basic product in eating habits”, thus revealing a clear preference of local consumers for this type of product and a permanent concern for economic decision-makers to find solutions and tricks to satisfy such a request (which can be very explosive at times), leaving economic deciders in complicated situation, either respond positively to consumer’s demand on cereal products (even if it requires more imports with high prices) or trying to boost and encourage domestic production (hoping favorable climatic conditions).

According to official figures , the consumption of cereal products is within a range of between 200 and 205 kg/capita/year, thus constituting one of the countries most affected by this production and above all a positive and regular development of the latter, even during the most difficult and complicated periods, and also that cereals and their derivatives constitute the backbone of the Algerian food system, and they provide more than 60% of the calorific contribution and 75 to 80% of protein contribution of food ration, developing, consequently, another track towards the question of the food safety. To remain in this line, Djermoun A [10] offers us some explanatory arguments on the progression of food consumption in this country, indicating, thus, that “one of the essential characteristics of the policy carried out by the public authorities remains price control throughout the sector. Cereals have always been considered as strategic products of first necessity whose prices must be relatively low, in relation to the purchasing power of the population”, emphasizing, therefore, the policy of food price subsidies (particularly cereals) initiated by public authorities, obviously, with a concern for the socio-economic stability of the country.

The fact remains that this cereal consumption emerges in a rather surprising form, because it is indeed the State which encourages sufficient and suitable cereal production, and at the same time, encourages a rather excessive consumption, because of a fixing of the prices of some food products (in particular semolina, flour, barley, corn, and others), thus creating a positioning which sums up well the logic of the welfare state which characterizes centralized regimes, but which weakens the future of the agricultural sector which is struggling to get rid of foreign dependence in the satisfaction of domestic consumption. We bear in mind the fact that such initiative and steps have created more inequality between consumers in the urban and rural areas, since that it has been noted that more level of consumption is reported in the first region than the other one, which create another problem of availablity of food products any time with any prices.

Based on a chronological and almost anthropological analysis, Chehat F [11] connects a reasoning having its departure from the nature of the Algerian population since independence, affirming that “the relative stability of the dominant consumption model is explained, although of course, by the slow changes in eating habits. But, it is largely explained by the nature of the regulatory mechanisms of the sector adopted by public authorities from the first days of independence and kept almost intact until today when many factors have played in the opposite direction”, revealing, therefore, the impacts of state interventions since independence to maintain and support food policy (and therefore cereals) as long as the financial capacities of the country allow it. It is clear that the nature of cereal consumption in Algeria is very common and similar to that of almost a large majority of Arab States, even if a large part is ensured by massive imports and huge expenditure on the level of public treasuries, that holds up, the most important thing being to stabilize the consumer markets and avoid scenes and probabilities of shortages and panic in these markets.

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In a rather critical, dotted, but objective tone, Daoud A & Bouzid A [12] affirm that "The price subsidy policy (for consumption and production) disrupts the functioning of the wheat sector, creates niches of rent and encourages deviant behavior among certain actors (producers, processors and consumers)", thus returning to the unfortunate consequences of food and cereal policy advocated by the State for its objective of supporting stakeholders in their needs and expectations, sometimes in a rather unfavorable and complicated economic context.

Several convergences are raised concerning this irrational, thoughtless and unsuitable attitude of the State in this question of cereal consumption, since the objective drawn up and pursued is, of course, of an exceptional and applauded social dimension and quality, but taking into account the nature of national economy (rentier economy by excellence), the irregularity of domestic production (for lack of climate change) and above all the unfavorable changes in international prices, this becomes relatively complicated in the case of an unfavorable economic context, even if this State prides itself on having the financial resources capable of covering the needs of consumers for this type of product. We just have to remember the nervous and wild reactions of the local population during the events of 2011 concerning the decisions to increase the prices of certain food products (like cereals), thus forcing economic decision-makers to reconsider their decisions and narrowly avoid the ramparts of the Arab Spring that have taken hold in a few other Arab countries.

Foreign trade in cereals: It should be emphasized that these exchanges and this foreign trade in cereal products constitute the black and sad point in this economic activity, in view of the unfortunate financial consequences suffered by the public treasury to finance, on a regular basis, the negative commercial differences and the financial holes of the agricultural trade balance.

In this issue and according to some data collected , the food bill has evolved from $2.5 billion in 2000, then $3.6 billion in 2005, and $6 billion in 2010 to reach the amount of nearly $9 billion in 2017, and for the year 2022, we are told that at the top of the import bill, we find food products with 1,473.6 billion dinars (10.37 billion dollars) against 1,191.7 billion dinars ($8.82 billion) in 2021, an increase of 23.65%. Compared to 2020, with a bill of 953.8 billion dinars (7.5 billion dollars) the evolution reaches 54.5%! ", and also that "over ten years, the food bill has gone from 660.5 billion dinars to 1,473.6 billion dinars, an increase of 123%", of which nearly 30 to 40% is made up of products cereals, which denotes and confirms not only this external dependence for this type of product, but also the legitimate concerns expressed during an unfavorable economic context, a well-founded argument developped and expressed during recent years.

In this register, Bessaoud O [13] informs us that "Algeria is the third cereal importing country in the world of wheat with a little more than 8 million tons, followed by Egypt with 12 million tons and Indonesia with nearly 9 million tonnes", thereby endorsing this dependence on international grain markets to supply domestic consumer markets and the objective of food security and sovereignty.

On the export side, it would be better not to go into too much detail, since these have not exceeded the $500 million threshold for decades, despite attempts by economic decision-makers to exceed this amount, based on competitive products capable of entering international markets, but This seems another study and analysis for further comments. In this matter and according, once again, to N.Sahal i, it is a question that "agricultural exports represent a share which varies between 0.56% and 1.10%. The last two years, 2016-2017, have experienced a threshold exceeding 1%. Despite this positive development, since the financial volume of exports recorded an increase of more than 1000% between 2001 and 2017 and more than 200% between the year 2009 and the year 2017, the volume of agricultural exports is still low. This, for the year 2017, only covers less than 5% of food imports for the same year", which justifies and clarifies, clearly and irrevocably, our concern and fear that this food and cereal dependence will be spread over longer and more costly periods in terms of financing cereal imports needed to feed the domestic population.

As a result, it is clear that the major concern of economic decision-makers in this country remains the question of financing the gap between the level of cereal (and food) production and that of local consumption for these products, thus leading towards inevitable and unavoidable imports from international markets, which have become so nervous and unstable since the painful and sad passage of Covid 19 and the consequences of the war between Russia and Ukraine (unfortunately two countries which dominate the international cereals market), without forgetting the eventualty of raising other factors that lead to some unfavorable situations for the state which could harm more and further public treasury. This is also confirmed by approaches of Rastoin JL, Benabderrazik [14], namely that "Algeria is therefore faced with a problem of external dependence which is accompanied by heavy bills and strong uncertainties due to the volatility of markets", knowing that, according to the latest data collected from the FAO, cereal prices increased by 18% in 2022 and that "over the whole of 2022, the FAO Cereal Price Index reached the new high of 154.7 points, which is 23.5 points (17.9 percent) higher than in 2021 and 12.5 points (8.8 percent) higher than the previous record annual average value recorded in 2011", a direct consequence of the two factors mentioned above, but also of some concerns noted at the level of production in other producing countries, such as Canada, Australia and others.

Another fact, and according to a certain source , it turns out that Algeria imported nearly 11 million tonnes of cereals during the year 2022, composed mainly of soft wheat with just over 6 million tonnes, maize with 2.6 million tonnes and durum wheat with 1.4 million tonnes, while on the side of our foreign partners, France is the leading supplier out of a group of 12 partners with 1.5 million

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tonnes for wheat tender, followed by Germany with 1.4 million tonnes and a group of other countries such as Romania, Russia and Ukraine with 1.3 million tonnes. This analysis of cereals market has revealed to us and raised that the question of cereals and more deeply that of the country's food policy is very critical in the long term, as long as the economic reality has taught us well and shown that the production cereal remains subject to climatic conditions that do not favor a gaping optimism, despite, it must be insisted, all the goodwill displayed and declared by economic decision-makers to improve this production, added to this, a consumption demand in full extension and ascending which hardly facilitates the task of ensuring that the food needs of consumer markets are met, more specifically the issue of sustainable and managed food security.

Food security tested by the national and international context

This subject of food security in Algeria is, as everywhere else, among the priorities of the State, because it concerns a population that requires nutrition commensurate with needs, both in terms of availability or quality and sanitary capacity, thus putting a strain on the efforts of economic decision-makers to put in place a suitable and appropriate strategy, with a concern for the mutual interest of different categories of the population and the State. First of all, Bouzid A [15] address this issue by stating that "Access for all to cheap food has thus become, over time, a constituent element of social contract proposed by the political power to the people. This political choice will determine all economic trade-offs relating to food policy", highlighting the role of the State in guaranteeing and safeguarding food security that is accessible to all segments of the population.

In another quotation , it is clearly stated that "Algeria has been classified by the World Food Program (WFP) of the United Nations, first in Africa in terms of food security, and that it is classified in the category of countries whose the rate of undernourished people is less than 2.5% of the total population, during the period 2018-2020. It is the only country in Africa not to exceed this threshold". In the same subject, O. Bessaoud believes that the food challenge constitutes a challenge for the Algerian State, in particular because food imports continue to be among the concerns of officials, given their weight in the trade balance (and therefore the balance of payment) and its increase in the level of public treasury, affirming that "Algeria is today highly dependent on its external means of payment to ensure its food supplies. If the decline in these resources were to continue over the next few years - all other things remaining equal - the political risk would be great of seeing the country unable to meet its food bill".

These few interventions (and others) indicate that this issue is not just a question of the availability of foodstuffs for the population, but of inserting international standards of hygiene and nutritional quality in the food products delivered. to consumer markets. To be more aware of the reality and the veracity of the statements made above, we will pay close attention to these statements, namely that "the discussion on food security for the Algerian case can be summed up in two essential points:

i. A national agricultural production (more precisely cereal one) which seems to be slow to ensure total coverage of the food needs for the population, which continues to progress and evolve.

ii. A foreign dependence which seems to go on forever and risks weighing heavily on the country's next financial maturities".

Admittedly, the State is trying to reassure national public opinion about a certain resilience in the face of possible external and internal shocks, as long as a certain financial ease resulting from the latest positive developments in oil markets, but the risks of a shortage of food products are very real, especially after the Covid and the consequences of the declared war, without forgetting the turbulence in international markets, and this was felt on food prices, an economic phenomenon approved and declared even by financial institutions such as the IMF and the World Bank.

This is again noted and quoted by Noureddine [16] who indicates that "these positive results are not sufficient for the achievement of the country's food security, hence the regular recourse to the international market to fill the national production deficit, particularly in strategic sectors. The analysis of the agricultural trade balance has shown the vulnerability of Algeria where a high food bill is spent annually to meet national needs". It becomes clear that tackling the issue of food security in Algeria comes down to tackling two essential and precious issues, namely one which concerns the limits of cereal and domestic food production, despite all the goodwill of the State in this direction. , and another which is linked to the risks of a strong and imposing import operation at the level of external markets, despite all the financial guarantees provided by this State. From a strictly economic and impartial point of view, and in this context of food security, we can reason this debate on the fact that inheriting a system based too heavily on government intervention in terms of compensation and subsidies prices of food products, the Algerian State has found itself in a paternalistic situation for consumers who only seek to satisfy their needs for this type of product, even if it means having recourse to imports, sometimes too costly for the public treasury, with advantages also granted to agri-food producers, but the parameter and variable "external and international markets" completely and largely escapes the powers of this decision's makers, putting, as a result, more pressure and burden additional resources for a more reassuring and comforting future, both for producers, consumers, businesses involved in these activities and the public treasury.

What sustainability of cereal production in a dual context of food security and the reality of international markets?

It seems useful and constructive to us to explain our focus on this type of production in this State by the fact that the particularity of the consumer markets and the consumption patterns that shape

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contemporary society, indicate a strong dependence on cereal foods, an accepted reality and recognized by the body concerned (FAO), but above all for an economy that is struggling to establish a competitive and diversified economy, but unfortunately does not yet seem to find the perfect and appropriate remedy. In some kind of recapitulation, and according to a cross-checking of the interventions of several experts , it is question that the Algerian production of cereals fluctuates from one year to another and is not stable during a given period, going from one extreme to another. , while the needs are estimated at an average of 8 million tonnes per year, which results in an estimated gap of an average of two million tonnes, largely filled by imports from international markets, now also subject to fluctuations and disturbances which have become very regular and insistent for some time.

At the national level, Masson [17] already insists too much on the effects of rainfall on cereal yields, even if he concedes that efforts made at the level of other means of production (traction, combine harvesters, fertilizers, labor work and others) are also important, stating that “we think we can say that it would be technically possible to double cereal yields using a classic technology, known in Algeria and resulting from the use of factors of production essentially manufactured in Algeria. », a way of situating the solution to the low cereal production in this country at the level of economic decision-makers directly linked to this agricultural activity. In another work , it is quoted that “the main obstacles to innovation cited by farmers are for 50% of them the variability of the climate (years of drought), and for 41% of them the difficulties in access financing, in particular because of their non-affiliation to agricultural insurance. However, it is the land tenure system that is cited by 78% of them as the main obstacle to innovation”, leads and confessions displayed by cereal producers that the government is required to support and analyzed.

Thus, and starting from these evidences at the national level, the sustainability of cereal production is subject to a certain rigor and economic tactics which highlight the most appropriate parameters adapted to the local characteristics and specificities of the country, betting, in particular, on a synergy between the needs and expectations of consumers in terms of availability and accessibility of agro-food products, and the needs and expectations of producers in terms of availability and accessibility of production factors.

On international level, things become more complicated for this type of production as soon as other producers come into play (perhaps with more sophisticated means), but above all the changes and movements of international markets, whether at the level of consumption than production.

In the summary of his paper, Neveu A [18] seems more resigned and precise, stating that “today, the satisfaction of the food needs of most populations is left to the good care of international trade, that is to say, in practice, to those in charge of its management, merchants and traders”, which translates a need for domestic producers and agri-food companies to comply with international standards dictated by international organizations, generally under the influence and dictate of the agricultural powers in this type of production. Consequently, and as can be seen, cereal production in Algeria finds itself embarked on a dual mission: Strengthening the growth and development strategy of this type of production to ensure more reassuring and comforting food security, and monitoring price developments at the level of production markets (for raw materials) and especially the consumer markets (for the international prices of cereals which have recently undergone profound upheavals and disturbances).

It is clear that with an area of 3.3 million ha, an average production over the five or six years which does not exceed 42 million quintals, coverage of only 30% of the needs of the population, and a food import bill between of 2 to 3 billion $ (of which common wheat represents 70% of wheat imports), the future and prospects for cereal production in this country do not look at all rest or enjoying suitable and appropriate sustainability, as long as the challenge proves to be relatively difficult to achieve in the near future, even if signs and facts relate all the importance and interest that the State attaches to this kind of production. In this issue, we will focus, more particularly, on the comments of Omari C, Moisseron JY, Alpha A [19], on such subject, namely that “For this country, it is a question of adopting a growth model that is compatible with both the internal political compromises between the actors but also with the agro-climatic constraints”, another way of projecting this production according to manifest and real realities for the Algerian government, particularly in a time when coverage of consumer demand remains the main concern for decisoon’s makers.

Final word

The theme concerning cereal production, in a particular context marked by numerous upheavals, is part of the agenda of united nations and international concerns, not only for the Algerian case, but for the whole planet and world economies. It turned out that the case of this country boils down to a certain and proven dependence for ages in food and food iquestions, hence the resurgence of another question concerning cereals, not in terms of varieties or new seeds, but more in terms of availability which turned out to be intended for food self-sufficiency, to convert into a need for food security, to then enlist that of food sovereignty. Starting from the fact that the consumption patterns of local population have not been modified since practically the country’s independence, the State has been entrusted with the tough, complicated and delicate task of bringing together the conditions necessary to respond favorably to this type of consumption behavior, even more aggravated and expanded during times of religious celebration, even if this too often requires immediate recourse to costly imports, as long as domestic production cannot meet local demand for cereals, and more particularly soft and durum wheat. The path still seems far and strewn with pitfalls for economic decision-makers to definitively settle this question

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of cereals, even if, it is constantly repeated, considerable efforts have been made in recent years, following the example of Saharan agriculture, precision agriculture, new cereal production strategy, expansion of irrigated and developed areas, but it seems that this will take enough time to achieve the set objectives.

This leads us to conclude that the establishment of a policy to promote and develop cereal production is in fact hampered by the country's economic situation, based essentially on the price of a barrel, which is themselves dependent on international markets, which further complicates the task of the government in the event of a sudden drop in those prices, with its devastating consequences on public treasury and the entire national economy, as was the case during the last economic and financial crises and especially the period of Covid 19 , which forced the public authorities to trigger emergency situations to maintain the socio-economic stability of the country. Entrusting the cereals sector with responding favorably to everyone's expectations and requirements means that production is called upon to redouble its technical efforts to achieve the objectives set out previously by economic decision-makers, in a national and international economic context which is becoming a complicated and delicate parameter, for producers and farmers looking for the best possible and attainable strategy, taking into account the question of changes in climate and international markets.

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