

Food security threats in Algeria and mechanisms to avoid them

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Abstract

Algeria has maintained its reliance on imported foodstuffs from foreign nations to address its persistent food deficit, a challenge it has struggled to entirely eradicate despite the implementation of numerous agricultural development initiatives. The continued dependence on food imports, notably strategic staples like wheat, exposes the country to a multitude of risks. These risks encompass deliberate actions, such as using food as leverage in negotiations affecting national sovereignty or imposing economic sanctions, as well as uncontrollable factors such as natural disasters and pandemics. These variables collectively threaten Algeria's future food security. Consequently, this research paper underscores the imperative for Algeria to redouble its efforts in the agricultural sector to secure domestic food supply sustainably for its population.

Keywords: Algeria, food deficit, food security, food imports, agricultural development.

Jel Codes Classification: Q1

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مهددات الامن الغذائي في الجزائر وآليات تفاديها

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ملخص:

لا زالت الجزائر الى غاية اليوم تعتمد على واردات السلع الغذائية الآتية من الدول الاجنبية لسد فجوتها الغذائية، التي لم تستطع التخلص منها نهائيا، وهذا بالرغم من الجهود والمخططات التنموية في المجال الزراعي التي قامت بتنفيذها. استمرار الاعتماد على الواردات الغذائية والتي على رأسها السلع الاستراتيجية كالقمح بنوعيه، هذا من شأنه أن يعرض هذا البلد الى مخاطر عديدة، منها ما هو متعمد كالمساومة بالغذاء مقابل السيادة الوطنية او الحصار الاقتصادي، ومنها ما هو بمثابة عامل خارج عن السيطرة كالكوارث الطبيعية والابوثة. وهذه العوامل ستؤدي بالضرورة الى تجويع شعب الجزائر مستقبلا. وبسبب ما سلف ذكره جاءت هذه الورقة البحثية لتنبه على ضرورة مضاعفة جهود الجزائر في المجال الفلاحي لضمان استمرارية توفير الغذاء لشعبها ذاتيا.

الكلمات المفتاحية: الجزائر، الفجوة الغذائية، العجز الغذائي، الامن الغذائي، السلع الغذائية.

تصنيف جيل: Q1.

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Introduction:

It has become imperative for countries facing relative food deficits, such as Algeria, to intensify their efforts in bolstering their agricultural development, even if they possess financial resources for food imports from other nations. This is because reliance on external sources for a portion of domestically producible food is not economically or politically prudent. Such food dependence subjects the importing country to economic, political, and even religious influence by the food-exporting nation. Algeria must rectify this situation and fully exploit its agricultural resources to avoid economic threats, like economic blockades, or political concessions in exchange for food, especially in light of the ongoing political conflicts affecting many nations worldwide.

On the other hand, in the context of the food shortage experienced by most countries, which is the result of several factors including human factors like population growth discussed by Malthus, as well as economic factors, and also natural factors like the prevailing climate in the country (nacef, 2018, p.147), and some due to environmental changes, the spread of pandemics, and the degradation of agricultural lands and water. all these factors have the potential to cause significant harm to global food production (both plant and animal).

The occurrence of such risks in a food-producing country can reduce its output and productivity, leading the country to transition from being a food-exporting nation to one that earnestly seeks to ensure the minimum dietary needs of its people. Consequently, the precursors of the calamities that nations relying on this country for their food imports might face become apparent. In this context, Algeria may well face these calamities in the future if it continues to rely on food imports from foreign countries, especially given that it imported food commodities valued at \$7.6 billion in 2020.

In light of this, how severe are the risks that may hinder Algeria's ability to meet its future dietary needs through imports? To answer this question, we have subdivided it into two sub-questions as follows:

- What are the factors and variables that compel Algeria to work diligently to achieve food self-sufficiency in 2020?
- What mechanisms can Algeria employ to avoid threats to food security?

Objectives of the Study:

The sole objective of this study is to attempt to highlight the severity and nature of the risks that Algeria may face if it continues to rely on food imports from foreign countries to bridge its food gap.

Significance of the Study:

This study can serve as a reminder to those responsible for developing agricultural development programs of the necessity and importance of redoubling efforts in the agricultural sector.

Scope of the Study:

The geographical scope of this study is limited to the country of Algeria, while the temporal scope is restricted to the year 2020 due to the availability of statistics up to that year (2020).

We have divided this research paper into two main axes as follows:

Axis One: Factors and Variables Compelling Algeria to Strive for Food Self-Sufficiency.

Axis Two: Solving the Food Deficit Issue Presented in the Sustainable Arab Agricultural Development Strategy for the Two Decades (2005-2025) and the Sustainable Arab Agricultural.

I- Axis One: Factors and Variables Compelling Algeria to Strive for Food Self-Sufficiency

One might wonder why there is a concern to reduce the food gap in Algeria as long as financing is available through oil exports. The response to this is that this funding will not last indefinitely. There is also a possibility of a decrease in demand for Arab oil due to the emergence of alternative sources (biofuels, oil sands, and water-saturated methane) in other regions, or the eventual depletion of oil. This means a decrease in the primary source of funding for the food gap. Furthermore, even with sufficient resources to finance food imports from Arab countries, this may expose Algeria to future political and economic pressures when political and economic disputes arise between Arab countries and foreign nations. In such cases, the advantage would likely be in favor of the major nations.

These disputes can lead to these countries refraining from exporting food to Arab countries or significantly raising food prices in the global markets. Food items can be used as a tool for political and economic pressure by major countries, necessitating policies to achieve food security in essential food items through local production. Therefore, reducing the food gap and achieving food security through self-reliance in Algeria should be a top priority, to protect itself from adverse economic and political developments that the future may hold (Abdul Khalek & Kareem, 2015, pp.103-104).

I-1- Political Factors

I-1-1-Direct Political Factors:

The instability of the political situation between economically weak countries (suffering from economic dependency) and economically strong countries or a group of countries can threaten the security of the weak country and lead to the loss of its sovereignty, affecting its decisions. There are many ways to influence and harm the security of any country. One of them is using food as a weapon against economically weak countries that hinder the interests of food-exporting countries.

Looking back in history, in a historical incident where food was first used as a weapon against Muslims by Jews and Christians, this incident was known as the Battle of the Trench. During this battle, Muslims were besieged, and food supplies were cut off for three weeks, subjecting them to harm, hardship, and hunger. This military strategy continues to be employed to this day by food-exporting countries against Muslim nations that rely on imports to meet their food needs. Among these countries is Syria, which faced economic sanctions in 2011, immediately after the strain caused by the civil revolution and subsequently weakened its production capacity. Syria was the only country in the region that was self-sufficient in food production, especially in basic agricultural crops such as wheat and barley. Syria even became a regional exporter before a severe drought in 2008 and 2009 forced it to import large quantities of wheat for the first time in several years. After four years of destructive conflict, the country has turned into a net wheat importer, with a decline in fruit and vegetable production. Syria had produced more crops in the years leading up to the uprising, thanks to improvements in land and crop management practices that helped it attract major markets in neighboring countries and the Gulf. Now, its massive strategic wheat reserves have been depleted or consumed at a rate that allows consumption for less than a few months, unlike the wheat reserves that used to cover the country's consumption for at least a year. These reserves were the cornerstone of the food security policy followed by the Baath Party to achieve self-sufficiency and mitigate the impact of Western economic sanctions (Carnegie Middle East Center, 2015).

Despite Syria's food security policy to counteract the impact of Western economic sanctions, it did not prevent Syria from being affected by the economic sanctions imposed by many countries worldwide, starting with the United States and the European Union and extending to Arab League countries. The United States was the first to initiate economic

sanctions, thereby announcing its prohibition on Americans exporting to Syria and importing from it. This further exacerbated the Syrian economy's weakening and exposed it to a gradual and ongoing policy of deprivation.

After Syria used to export wheat and various grains to many countries, especially Arab nations, it now finds itself importing grains, including wheat, to ensure its food needs. Syria has entered into grain supply contracts with Russia to meet the growing demand after its production fell to below one million tons annually. A contract has been signed for the supply of 3 million tons of wheat, originating from Russia, with credit facilities for payment. The contract spans three years, with repayment over eight years (Al-Arabi Al-Jadeed newspaper, 2017).

In light of the international interests, Algeria should be cautious when relying on foreign countries (especially non-Muslim ones) to meet its food needs. With international politics in play, today's friendly country can become tomorrow's adversary, as history has shown with many examples where Muslim nations faced economic blockades and food used as a weapon. In case of political problems between Algeria and another country it relies on for food imports, the first strategic step that country may take is to halt its exports. This paves the way for an economic blockade, possibly involving other friendly countries, especially those of Jewish and Christian faiths. Therefore, Algeria should make diligent efforts to substitute food imports through local production, especially by intensifying efforts in the agricultural sector. This would ensure the availability of essential food items, particularly strategic food products, through local production. This way, Algeria can maintain its sovereignty in making political decisions at both the local and international levels.

I-1-2-Indirect Political Factors:

After previously discussing the direct political factors that push Algeria to exert more efforts to provide its essential food needs by relying on itself (by direct political factors, we mean those political problems that occur between two countries, resulting in damages that may affect the sovereignty of one of the countries, especially if one of them is economically dependent on the other), we will now talk about the indirect political factors. These factors can lead to a third country suffering from a food crisis, causing its people to suffer from famine.

We are well aware of the extent and volume of the contracts that many countries sign with each other in various fields, including contracts for large-scale food transactions. These food contracts are signed between various countries, between Arab and Western countries, between Arab countries and their counterparts, and even between Western countries themselves. For example, Jordan used to sign contracts with Syria to import wheat, and there are also significant agreements in the field of wheat imports between Arab countries and Russia.

In case of political problems within the source country, this leads to the disruption of food agreements, posing a threat to the food-importing country, and consequently, the possibility of facing a food crisis that may plunge most of its population into hunger. Jordan had long relied on Syria for importing substantial quantities of wheat before the outbreak of the Syrian revolution in March 2011. The revolution created political problems within Syria, followed by the economic blockade imposed on Syria by many Western and Arab countries. This led to a decline in wheat production from 5 million tons annually to 1.7 million tons. This decline not only prevented Syria from exporting wheat but also forced it to import wheat from Russia to meet its food needs.

One of the examples of indirect political factors whose effects are still evident in the food security of some countries is the Russian-Ukrainian political crisis. This is because Ukraine and Russia play significant roles in global commodity markets. The uncertainty surrounding the war has led to price increases, particularly for wheat, corn, and oilseeds. The Food and Agriculture Organization (FAO) Food Price Index reached its highest level ever in March

2022, averaging 158.2 points in April 2022, and it remains at historically high levels to this day. Countries like Turkey, Egypt, Eritrea, Somalia, Madagascar, Tanzania, the Congo, Namibia, and others that depend on Ukraine and Russia for wheat production have been significantly affected (United Nations, 2022).

In light of the aforementioned points, Russia and Ukraine are major producers and exporters of essential food commodities, playing leading roles in supplying global markets. Over the past three years (2018/2019 - 2020/2021), they jointly accounted for 30% and 20% of global wheat and corn exports, respectively, as well as approximately 80% of sunflower oil exports. Given the export market's focus on food products, the continued decline in exports from these two countries may have significant effects on global prices and global food security in the future. Furthermore, the Russian Federation is a primary source of fertilizers (Food and Agriculture Organization, 2022).

What can be inferred from the above is that both direct and indirect political factors make food-importing countries vulnerable to the repercussions of political problems that occur in the food-exporting countries, whether the importing country is directly or indirectly affected. Therefore, Algeria needs to seriously consider such factors and focus its efforts on increasing the production of strategic food commodities to prevent falling into a food crisis, even if exporting countries face political crises or wars that impede their ability to export food, as was the case with Syria in the past or with Ukraine currently.

Algeria engages in import and export activities with numerous countries worldwide, including European countries (France, Italy, Britain), Asian countries (China, India, Korea, Saudi Arabia), countries from the Americas (Argentina, the United States, Brazil, Cuba), African countries (Egypt and Tunisia), and countries from the Oceania region (Australia and New Zealand). China, France, Italy, Spain, Germany, and Turkey are considered the most important suppliers to Algeria (Algerian Ministry of Trade, 2020). In 2020, Algeria's total imports from these countries amounted to \$34.66 billion, with food imports valued at \$7.6 billion (Arab Organization for Agricultural Development, 2021).

I-2-Human Factors

The issue of food security represents a real challenge that surpasses the capacity of many countries to confront individually. However, this problem is exacerbating in the current times with the spread of the threat of famine in several third-world countries, especially in Africa. Current estimates indicate that the world's population will reach approximately ten billion people by the year 2050. According to a recent study by the French Institute for Demographic Research, the global population has increased sevenfold over the past two centuries, and it is expected to continue rising, possibly reaching 11 billion by the end of the twenty-first century.

The highest population growth rates will be concentrated in Africa and some Middle Eastern countries during the coming decades. The seven largest countries in terms of population, namely China, India, the United States, Indonesia, Brazil, Pakistan, and Nigeria, will collectively account for 3.85 billion people, which is more than half of the world's population.

Even with moderate economic growth rates, the expected increase in population will lead to a natural increase in demand for food, especially agricultural products, by approximately 50 percent compared to current levels. This will create additional pressure on already scarce natural resources. The pressing question for international decision-makers and organizations such as the United Nations and the Food and Agriculture Organization (FAO) revolves around the future capacity of the current food system and agricultural methods to meet the nutritional needs of the growing global population.

Given the limited agricultural land on a global scale and the scarcity of freshwater suitable for agricultural production, there are doubts about whether the available agricultural methods

at present can successfully meet the nutritional needs of the increasing human population in the future. Statistics indicate that since the agricultural revolution of the 1990s, the production of major crops, including wheat, has not increased at the same rate as the population growth. Therefore, it appears that the available indicators reveal that the increase in the world's population is growing at a rate approximately twice that of the growth rate in the production of major crops (Al Arab International Economic Newspaper, 2017).

In the field of agricultural crops, some international analysts advocate a global call to overcome the current challenges in future food security by making radical changes in the nature of the strategic goals of the agricultural sector. Some experts in the agricultural field emphasize the need to focus on the future strategy of the global agricultural sector, as well as on priority activities, including increasing the productivity of major crops such as wheat, rice, and maize. They also stress the promotion of commercial agriculture through increasing and supporting value-added activities for agricultural products. To achieve this, it is essential to improve farmers' access to necessary financing.

Achieving these goals requires a fundamental change in the nature of the global economic system through a wide-ranging effort to finance the agricultural sector, which is the main sector in many developing economies, especially in Africa. If the primary challenge in the coming years is the ability to produce larger quantities of food crops with fewer resources, accompanied by the necessity of a smooth transition to food production systems that can maximize productivity from agricultural land and water resources by reducing waste, it is unlikely that this can be achieved without intensifying investments in scientific research. This can be considered the optimal means to increase agricultural production and, consequently, overcome future concerns about the insufficiency of food production to meet the expected population growth (Al Arab International Economic Newspaper, 2017).

Population growth is considered the primary factor exacerbating the food issue, as the population size is increasing at a rate that exceeds agricultural production growth. This, in turn, leads to an imbalance in food supply and demand, especially when this population increase is accompanied by a fundamental shift in population distribution between rural and urban areas. This shift can result in the decline of agricultural performance in these regions on one hand and urban expansion at the expense of agricultural land on the other (Gharab, 2015, p.57).

As mentioned earlier, the global population is continuously growing, and it is expected to continue rising, possibly reaching 11 billion by the end of the twenty-first century. Therefore, Algeria should not overlook this population increase and should consider it in its agricultural programs and policies aimed at enhancing food security. The question that comes to mind is why Algeria should not ignore the increase in the global population and why it should take this increase into account in its programs and policies aimed at enhancing its food security. The answer to this question will be found in the following paragraphs.

In the face of the increasing global population and the accompanying wheat production at rates lower than population growth, this can lead to disruptions in the wheat commodity market within individual countries. This makes wheat-exporting countries shift their focus from exporting wheat to striving for a balance between supply and demand for this commodity within their borders. In other words, if the population of a country increases while its wheat production remains stable or only slightly increases, that country may cease wheat exports and instead concentrate on meeting its local wheat needs, regardless of what is happening beyond its geographic boundaries.

Naturally, every country will adopt a similar strategy in the event of a population increase while wheat production remains low, retaining its production to satisfy the local food needs. This has the potential to force many food-dependent countries into food crises in the future, as mentioned earlier. This will happen if food-dependent countries do not accelerate the optimal

utilization of their agricultural resources and harness all efforts to ensure their food security in strategic food commodities.

During the period from 1990 to 2022, the global population increased from 5.28 billion people to 8 billion people. The main factors contributing to this significant growth include an increase in the number of individuals reaching reproductive age, gradual increases in human life expectancy, higher levels of urbanization, and accelerated migration. This population growth has been accompanied by significant changes in fertility rates. These long-term trends will have far-reaching effects on future generations (United Nations, 2022).

In light of the population growth that occurred worldwide during the period 1990-2022, we can sense the magnitude of the threat that can affect global food security in general, and food-dependent countries in particular. With the increase in the world's population at rates exceeding global food production growth, this could expose Algeria to the risk of hunger. This risk could arise from the possibility of food-exporting countries discontinuing their food exports to these countries, arguing that food production will only meet domestic needs. In other words, there will be no surplus in food production due to the increase in population without a corresponding increase in food production. As a result, food-exporting countries may halt their exports to Algeria.

To ensure its future food requirements and avoid the serious repercussions of population growth, Algeria must expedite efforts to optimize its agricultural resources. This optimization is vital to guaranteeing food for current and future generations. It is not a difficult or impossible task, and its success hinges on strategic planning. For instance, India and China, which have the highest population density in the world, were expected to face severe food crises in the 1970s. However, this was not the case due to the strategic plans adopted by both countries to secure food and address any food shortages resulting from population growth. Indeed, these two countries succeeded in producing their basic food needs and subsequently began exporting surpluses to the rest of the world.

I-3-Natural and Economic Factors

Natural and economic factors can have both positive and negative effects on a country's food security because natural disasters and economic crises, such as oil depletion for food-importing countries, can all have adverse repercussions on food-deficient countries.

I-3-1-Natural Factors:

I-3-1-1-Scarcity and deterioration of land and water:

The major food production systems worldwide face a significant threat in the widespread deterioration of land and water resources and the worsening scarcity of these resources. These challenges have far-reaching implications for efforts to meet global food needs by 2050 when the world's population is expected to reach 9 billion people. According to the FAO report titled "State of the World's Land and Water Resources for Food and Agriculture," the past fifty years have seen a threefold increase in food production. However, these achievements have often been achieved in regions where practices have led to the degradation of the very land and water resources on which food production relies.

Today, many of these systems face the gradual erosion of their productive capacities due to a combination of demographic pressures, unsustainable agricultural practices, and excessive use. This situation applies to regions around the world, from the Andean highlands to the plains of Central Asia, from the Australian Murray-Darling Basin to the central regions of the United States.

The FAO report warns that the depletion of natural resources will exacerbate competition among urban and industrial sectors, as well as within the agricultural sector itself, between livestock and major crops, non-food crops, and biofuel production requirements. As a result, the challenges of providing sufficient food for the world's population, which is projected to increase significantly and already suffers from hunger, especially in developing countries,

become more critical. Water scarcity, dwindling good land resources, and soil nutrient depletion are particularly acute in many regions across all continents. The most significant threat is the loss of soil quality, followed by the loss of biodiversity and the depletion of water resources (Food and Agriculture Organization of the United Nations, 2011).

There are approximately 1.6 billion hectares of the world's best and most productive lands cultivated with crops. Most of these areas are classified as "improved," but parts of these regions have started to experience stress due to agricultural practices that lead to water and air erosion, loss of organic matter, soil surface compaction, excessive salinity, pollution, and nutrient depletion. What the FAO report reveals is that water scarcity is worsening due to increasing salinity, groundwater pollution, and the deteriorating state of water bodies and ecosystems. Large inland water bodies in many areas are under pressure from decreasing flows and excessive nutrient accumulation, particularly nitrogen and phosphorus. While many rivers no longer reach their natural outlets, their wetland areas are also disappearing. In major grain-producing regions around the world, groundwater withdrawal concentrates on the aquifer reserves that are easily accessible and relied upon by rural communities as a primary resource. Depending on groundwater for major food production leads to the depletion of non-renewable groundwater reserves, posing a growing threat to both local and global food production (Food and Agriculture Organization of the United Nations, 2011).

I-3-1-2-Natural Disasters:

Natural disasters have always contributed to exposing many countries to famine and starvation, either directly or indirectly. The direct impact occurs at the level of a single country, where a natural disaster results in the destruction of agricultural crops, either completely or by exposing them to contamination by germs or dangerous chemicals. This has occurred, for instance, in Southeast Asia due to the tsunami disaster, as well as flooding and hurricanes in New Orleans, USA (World Health Organization, 2005, p.1). Such disasters affect food security, causing the people of that country to suffer from hunger and malnutrition, especially if the country does not have the funds to rely on for importing its food needs, or if it does not receive sufficient food aid to meet its needs that were previously provided by damaged crops due to natural disasters. When this direct impact extends beyond the borders of the country affected by the natural disaster and negatively affects the food security of other countries, we are facing the indirect impact of natural disasters on food security. In this case, food-dependent countries are affected if they rely on the country where the natural disaster occurred for their food imports.

Natural disasters result in many immediate and long-term adverse effects, exacerbating food insecurity and spreading poverty. Due to the significant danger of natural disasters on food security, many countries have called for the necessity of enhancing national and international measures to prepare for unforeseen and emergency cases of natural disasters. They aim to improve the effectiveness of the interventions taken in emergency situations, whether through food interventions or otherwise. They emphasize the need to integrate these measures into the efforts of all stakeholders in sustainable development to achieve sustainable food security. They declare their commitment, through economic development, to ensure that famines do not reappear, using early warning systems and emergency assistance (Food and Agriculture Organization of the United Nations, 2002, p.5).

Natural disasters occur as a result of natural hazards in vulnerable regions, resulting in massive damages, livelihood disruptions, and potential loss of lives. These disasters often render affected communities incapable of performing their usual functions. When analyzing the impact of disasters on food security, it is beneficial to differentiate between disasters caused by geographical and natural factors and those caused by water and weather-related factors. The first category includes earthquakes, tsunamis, and volcanic eruptions, while the latter includes floods, tropical cyclones, storms, and droughts. It is likely that the latter type of

disasters has broader implications for agriculture and food-related activities. Biological hazards such as disease outbreaks or infectious diseases in plants and animals are also referred to as natural hazards (Food and Agriculture Organization of the United Nations, 2011).

Natural disasters, including droughts, result in billions of dollars in losses annually for farmers in developing countries. Among a group of factors that also includes floods, forest fires, storms, plant pests, animal diseases, chemical leaks, and rapid algae proliferation, drought is the most destructive. According to a report from the Food and Agriculture Organization of the United Nations (FAO), between 2005 and 2015, natural disasters cost the agricultural sectors in developing economies approximately \$96 billion due to losses or damage to plant and animal production. The report, released at a conference in Hanoi, organized by the Vietnamese government in collaboration with the FAO, indicates that half of these losses (\$48 billion) occurred in Asia. Drought, which has affected farmers in various regions worldwide, north, south, east, and west, is the most significant threat to agriculture. Approximately 83 percent of the total economic losses resulting from drought were borne by the agricultural sector, with a cost of \$29 billion (Food and Agriculture Organization of the United Nations, 2018).

In Asia, the region most affected by agricultural damage caused by disasters worldwide, the greatest impact was attributed to floods and storms. Additionally, Asian agricultural systems were significantly affected by earthquakes, tsunamis, and high temperatures. In both Africa and the Latin American and Caribbean region, drought was the worst natural disaster, resulting in crop and livestock losses amounting to \$10.7 billion and \$13 billion, respectively, between 2005 and 2015 (Food and Agriculture Organization of the United Nations, 2018). Crop pests and animal diseases also caused substantial losses for African farmers, exceeding \$6 billion during the same period. Among all countries worldwide, small island developing states were the most vulnerable to various natural disasters, especially tsunamis, earthquakes, storms, and floods. The economic losses in these island nations due to disasters increased from \$8.8 billion between 2000 and 2007 to over \$14 billion between 2008 and 2015. Undoubtedly, the food security situation in many disaster-prone countries has worsened, particularly in Africa, due to ongoing wars and civil conflicts, exacerbating both food insecurity and household poverty in many nations (Food and Agriculture Organization of the United Nations, 2003).

The Food and Agriculture Organization of the United Nations (FAO) has converted the magnitude of losses caused by natural disasters in the field of food production into kilocalories and essential nutrients. The organization estimated that the losses in agricultural crops and livestock in low- and middle-income countries during the period of 2008-2018 amounted to losses equivalent to 6.9 kilocalories per year. This figure represents the amount of food consumed by seven million adults in one year. In Africa, the cumulative production loss after the disaster during that period was estimated at 204,000 kilocalories, which is equivalent to 82 days of caloric intake for an individual in a year (Food and Agriculture Organization of the United Nations, 2021).

In Algeria, wheat production decreased in 2021 compared to 2020, with a decline of approximately 13%. This decline was attributed to drought, rising temperatures, and reduced rainfall (Arab Organization for Agricultural Development, 2021).

I-3-1-3- Spread of pandemics

The Arab countries, like the rest of the world, were affected to varying degrees by the novel coronavirus (COVID-19) pandemic. The trade of food commodities in the Arab region exhibited extreme sensitivity to crises and pandemics. The repercussions of the pandemic led to shocks in the supply and demand for food commodities due to lockdowns, reduced wages, increased food prices, rising transportation costs, and the effects of policies adopted by some major food-producing countries regarding their food exports. Arab countries also faced

challenges in obtaining manufactured and semi-manufactured food products from outside the region, in addition to a decrease in demand for Arab raw export materials. The United Nations policy brief (2020) summarized the expectations, indicating a 6% decline in agricultural and food product production. On the other hand, the forecasts included a 13% decline in Arab countries' imports and a 45% decline in foreign direct investment (FDI) (Arab Organization for Agricultural Development, 2021).

The deterioration of land and water resources, the spread of epidemics, and natural disasters have serious implications for food security and the economic situation of the affected countries. Given the interconnectedness of the global economy and the reliance of countries on each other through international trade, particularly for food imports in the case of developing countries, any disruption in the natural factors in food-exporting countries can negatively impact the food security of importing countries. This can lead to food shortages, hunger, and related problems.

As Algeria is one of the countries that imports a portion of its food requirements from various countries, including Asian and American nations, and considering that these countries are not immune to the natural risks mentioned earlier, Algeria's food security is likely to be significantly affected in the future. This is an inevitable consequence if there is a disruption in the natural factors in food-exporting countries. Such natural disruptions can lead these exporting countries to halt food exports and retain their production to address potential shortages.

Therefore, Algeria should strive to reduce its reliance on food imports to meet its population's nutritional needs. It should work on maximizing its efforts to provide food through local production, with a focus on strategic food commodities with high consumption rates. This strategic approach aims to prevent any emergencies that could occur in the future and lead to food shortages in countries heavily reliant on food imports.

I-3-2-Economic Factors:

Oil is considered one of the significant economic commodities for oil-producing countries. Its importance derives from its economic value, making it a widely used economic commodity by the global population. Therefore, countries possessing this economic commodity have a source of financial resources. These funds enable them to meet all their daily needs and requirements, including clothing, food, and even luxuries. This is achieved either through local production using oil revenues or through imports from other countries in cases where local production falls short.

The depletion of oil reserves or the development of new technologies for oil extraction pose challenges for the Arab world's ability to import food. In the realm of exploring the future prospects of oil, experts distinguish between traditional and non-traditional oil. In this context, the question arises about the prospects of the end of the era of traditional oil and the beginning of the era of non-traditional oil and the implications of this transition. Non-traditional oil refers to oil found in oil sands, heavy crude, and shale oil. This non-traditional oil is already produced from tangible fields of heavy crude in Venezuela and oil sands in the Athabasca region of Canada. It differs from liquid fuel obtainable from other additional sources like coal, natural gas, and biomass in being more compatible with the existing vast infrastructure for oil production, refining, distribution, and consumption. According to the most likely estimations, global production of traditional oil from all regions is expected to peak between 2020 and 2050. As for traditional oil production outside the Middle East region, it is expected to reach its peak between 2010 and 2030. This implies that the end of the era of traditional oil is looming on the horizon (Abdul Khalek & Kareem, 2015, p.83).

The end of the era of traditional oil and the beginning of the era of non-traditional oil means that the revenues generated by Arab countries from oil production and exports are likely to decline due to the expected reduction in traditional oil production. However, during

the remaining period of traditional oil, we will find that the importance of Arab world's oil will increase, along with the economic and strategic significance for Arab countries. This presents a golden opportunity for the Arab world to invest the returns from oil before the decline phase in achieving food security by relying on domestic production and obtaining the highest return from oil wealth during the remaining period of traditional oil. To achieve this, food security must be considered in the same light as national security (Abdul Khalek & Kareem, 2015, p.84).

Some oil-producing Arab countries rely heavily on the revenues from petroleum products to bridge their food gap through imports. Such countries may find it challenging to foresee their future after oil depletion, especially those whose oil exports constitute a significant portion of their export revenues. This reflects their heavy dependence on petroleum exports to generate foreign currencies, which they then utilize to import food.

The majority of Algeria's foreign currency revenues result from the exploitation of its natural resources, such as oil and natural gas. If Algeria continues to rely on imports to meet its food needs without giving significant importance to achieving food security through domestic production, it could face difficult circumstances with limited long-term options. Therefore, it is essential for Algeria to reconsider its agricultural policies by providing incentives and effective technologies to increase food production and create jobs in rural areas. This is to mitigate the potential consequences that may arise in the future due to the depletion of these natural resources (Saif, 2008, p.1).

II- Axis two: Consequences of Food Security Threats, Solutions, and Achievements

Since food deficiency in itself is a problem, it implies that it has negative repercussions in both the short and long term. Several solutions have been proposed to address these repercussions, and in this axis, we will discuss the most important of these consequences, along with potential solutions to alleviate them.

II-1- Consequences of Food Security Threats

When examining the repercussions or negative effects that the factors and variables leading to food deficiency can have in developing countries in general and the Arab world in particular, we find that there are many negative effects. These repercussions can be divided into economic, political, and social consequences.

II-1-1-Economic Consequences:

The Arab region is considered a region with a chronic food deficit, which forces Arab countries into a perpetual food dependence on external markets. This means increased financial burdens on the budget, hindering the progress and development, and emphasizing the need to provide food under any circumstances and at any cost (Hamdan, 1999, P.146).

There is a reality indicating that the food deficit is not only a result of the weakness of Arab economies but may also be a major reason for keeping these economies weak. Moreover, the resources directed towards importing food often come at the expense of those allocated for acquiring essential inputs necessary to sustain growth (Mukhadami, 2009, P.139).

The food aid, which serves as a cushion for the trade balance of Arab economies, is, in fact, a trap set by Western countries to dominate Arab economies. For example, according to sources from the US Bureau for African Affairs, eight out of ten countries that are major importers of American agricultural products were previously included in the US food aid program. Even the increase in Algerian natural gas exports to the United States was a reaction to its increased share of American food aid allocated to the Arab Maghreb. Consequently, the long-term goal of American food aid, which applies to all foreign countries, is to open trade markets for agricultural products to gradually replace food aid. The purpose of foreign aid is not to solve the Arab food deficit but to stimulate the commercial exports of donor countries, potentially ensnaring developing countries in their influence (Mukhadami, 2009, P.140).

II-1-2-Political Impacts: Due to poverty, many third-world countries turn to foreign aid because their production is slow or unable to reach the desired development indicators, especially since advanced countries have a surplus of food. While foreign aid can contribute to building food stocks or reserves in developing countries to cope with fluctuations, there are several negative effects that necessitate caution in relying on such aid. This is because there is a possibility that developing countries may face a halt in foreign aid for several reasons, which could be political, such as pressure on beneficiary countries (Mukhadami, 2009, pp.55-56). This can compromise the national sovereignty of developing countries, making them subject to the countries providing food aid or food-exporting nations.

Food-exporting and aid-providing countries are economically advanced and few in number. They can practice a policy of monopolizing the market, which affects the global food market and consequently impacts the economic and political decision-making freedom of Arab countries. One of the most significant food exporters is the United States, which has used and continues to use food as a political pressure tool on countries worldwide. Some clear examples of this include (Hamdan, 1999, P.146):

- Halting food supplies to Egypt after the Suez Crisis in 1956 and before the Six-Day War in 1967.
- Using food as a weapon against the democratic Allende regime in Chile in the 1970s, leading to the collapse of the democratically elected government.
- Using food exports against the Soviet Union (formerly) to negotiate arms control agreements and facilitate Jewish emigration.
- Using food as a weapon in a manner contrary to humanitarian norms against the Iraqi population since the Gulf War in 1990 and up to the present.

II-1-3-Social Impacts:

Given the current state of Arab food economies, it is expected that the gap between the rich and the poor in society, in general, and between urban and rural areas, in particular, will widen. This implies an increase in the tendency for rural migration, leading to a disruption in the ownership of agricultural resources in rural areas. Small-scale producers may either become agricultural laborers or city dwellers living on the outskirts of urban areas, thereby becoming consumers with a negative impact on infrastructure (Hamdan, 1999, P.147).

II-2-Solutions to the Food Shortage Problem Presented in the Sustainable Arab Agricultural Development Strategy for the Two Decades 2005-2025 and the Sustainable Arab Agricultural Development Strategy 2020-2030.

Within the framework of the strategic decisions of the Sustainable Arab Agricultural Development Strategy for the Two Decades 2005-2025, Arab agricultural work enters a new phase. Through this phase, Arab citizens can anticipate achieving the desired Arab agricultural integration and ensuring food security for future generations. The Executive Council of the Arab Organization for Agricultural Development has adopted the main guidelines for preparing the Sustainable Arab Agricultural Development Strategy for the Two Decades 2005-2025, which include the following main and sub-axes (Arab Organization for Agricultural Development, 2008, PP.14-18):

II-2-1-Water - the main determinant of agricultural development: It includes the following sub-axes:

- a.** Improving the management, protection, and maintenance of water resources through the development of governing legislation.
- b.** Enhancing the efficiency of irrigation water use through:
 - Policies emphasizing the economic perspective of water use.
 - Information systems on water economics in agricultural activities.
 - Joint investments to develop field irrigation systems.
 - Joint research to enhance water use.

- Advancing technologies and managing water resources.
- c. Developing Arab cooperation in the investment of shared water basins.
- d. Preserving Arab rights in transboundary waters.
- e. Arab coordination for the development of water resources from traditional and non-traditional sources.
- f. Arab cooperation to expand the use of renewable energy in desalination and research development in this field to reduce costs.
- g. Water awareness by promoting a culture of prudent water use in Arab agriculture.

II-2-2-Land development and protection: It includes the following sub-axes:

- a. Horizontal expansion in suitable Arab environments with relative abundance of Arab land and water resources.
- b. Preserving the agricultural environment, such as land, vegetation, and wildlife in Arab countries.
- c. Coordinating Arab policies and legislation regarding land use for agricultural and non-agricultural purposes.
- d. Focusing on joint studies and research to combat desertification and mitigate the deterioration of Arab lands.
- e. Coordinating Arab legislation related to controlling urban sprawl and inappropriate non-agricultural uses and overgrazing.

II-2-3-Utilization of Arab Agricultural Resources from an Integrative Perspective: This encompasses the following sub-axes:

- a. Promoting the concept and culture of integration in utilizing Arab agricultural resources and disseminating awareness of this culture.
- b. Completing surveys to inventory available agricultural resources for Arab integrative utilization.
- c. Integrating economic and agricultural development strategies and policies at both the Arab and national levels to achieve integrative development goals.

II-2-4-Agricultural Technological Development and Modernization: This includes the following sub-axes:

- a. Strengthening vertical development pathways of Arab agricultural production by providing the requirements for development and modernization of production, marketing, and support systems.
- b. Supporting the capabilities of farmers in Arab countries, particularly small-scale farmers, to adopt and apply modern technologies.
- c. Arab cooperation to enhance traditional sectors technologically and provide a conducive environment for their development and modernization.
- d. Coordinating Arab efforts to promote innovation in priority agricultural technology areas and protect intellectual property rights.
- e. Supporting and developing Arab agricultural research systems in service of Arab agricultural development, with a focus on:
 - Adapting and localizing suitable technologies for Arab agricultural conditions.
 - Identifying priority research areas for Arab agriculture.
 - Adopting a contract research system for priority agricultural research.
 - Increasing investments directed towards scientific research development, following economic principles and providing funding sources.
 - Focusing on research and development of the role of the private sector in this field.
 - Utilizing the results of research and international networks, as well as distinguished Arab and regional research centers.
 - Coordinating and collaborating with Arab, regional, and international research centers.

II-2-5-Sectoral Development Priorities: This major axis includes establishing criteria for determining sectoral development priorities at both the national and Arab levels, which include:

- a. Sustainable agriculture programs.
- b. Economic efficiency.
- c. Availability of suitable marketing opportunities.
- d. Opportunities and potential for improving production levels.
- e. Creating a conducive agricultural environment for production.
- f. The social dimension of development.

II-2-6-Capacity Building and Human Resource Development: This includes the following sub-axes:

a. Strengthening Qatari and Arab institutions through designing and implementing specialized training programs, particularly in the following key areas:

- Technology transfer.
- Policy formulation and decision-making.
- Dealing with contemporary regional and international issues.
- Negotiation skills at both international and regional levels in agriculture, water, and environmental-related matters.
- Organizing and managing the agricultural sector.

b. Focusing on building the necessary frameworks and capacities to drive sustainable Arab agricultural development at various levels:

- Farmers.
- Professionals and artisans.
- Researchers.
- Policy makers and decision-makers.

c. Enhancing the level of agricultural education in Arab universities and vocational training, and aligning programs with the needs of sustainable Arab agricultural development.

d. Allocating the necessary financial resources for capacity building in various agricultural fields and establishing Arab mechanisms in this regard.

e. Developing more effective methods for the exchange of Arab experiences in areas of mutual interest in agriculture.

II-2-7-Joint Agricultural Investment: This includes the following sub-axes:

a. Providing a favorable and stable investment climate to attract private sector interests in agricultural development activities.

b. Preparing a map of promising agricultural investments, developing and implementing programs to promote investment opportunities, and assisting in economically and technically preparing these opportunities in collaboration with the private sector.

c. Securing the risks of joint agricultural investment.

d. Updating and activating Arab agreements in the field of investment, particularly the Arab Agreement for the Guarantee of Investments in Arab States.

II-2-8-Reviving Arab Agricultural Trade as a Driver of Development: This major axis includes the following sub-axes:

a. Enhancing the competitiveness of agricultural products in Arab markets and for accessing foreign markets.

b. Diversifying Arab agricultural exports in line with available opportunities in foreign markets.

c. Encouraging the Arab private sector to establish joint projects in marketing and agricultural manufacturing.

d. Removing all obstacles hindering the flow of Arab agricultural trade within the framework of the Greater Arab Free Trade Area.

e. Developing support services for Arab agricultural foreign trade, including trade information systems, financing, port services, transportation, storage, and customs facilities to facilitate trade.

f. Coordinating Arab trade policies, procedures, and conditions related to agricultural quarantine, veterinary matters, pesticide registration, plant health, origin rules, standards, and specifications, ultimately working toward their harmonization.

II-2-9-Adapting to Contemporary and Future Regional and International Changes: This includes the following sub-axes:

a. Enhancing the capacity of Arab agricultural producers and business communities to adapt to changes by developing awareness and knowledge programs to align with the requirements of adaptation to these changes.

b. Coordinating Arab positions for negotiation on Arab interests.

c. Establishing a mechanism to coordinate Arab positions in negotiations related to Arab agricultural interests.

d. Conducting foresight studies and assessments to evaluate and analyze the impacts resulting from regional, Arab, and international changes and agreements.

e. Exchanging experiences and expertise among Arab countries and with other developing countries to join international agreements and organizations.

f. Maximizing the benefits of technical assistance programs offered by international institutions to enhance negotiation skills for Arab countries, particularly in agricultural fields.

g. Introducing specialized subjects into agricultural education curricula at Arab universities to inform students about Arab, regional, and international changes, thus graduating qualified academic professionals capable of dealing with such changes in agricultural fields.

h. Establishing a comprehensive system for Arab agricultural trade information, agreements, and protocols related to agricultural fields, and enhancing the role of private sector institutions in this area.

II-2-10-Contributing to Rural Prosperity: This includes the following sub-axes:

a. Developing integrated national and regional Arab programs aimed at reducing poverty in rural areas.

b. Focusing on income-generating economic activities in Arab countries, particularly in rural areas, with an emphasis on developing suitable technologies to utilize secondary products from agriculture.

c. Improving the performance of Arab support and assistance institutions for small and micro-projects, particularly in the following areas:

- Financing.

- Marketing.

- Training and skill development.

- Providing direct support in disaster situations.

d. Creating and increasing employment opportunities in Arab rural areas and addressing seasonal unemployment in agriculture.

e. Supporting integrated rural development projects and upgrading facilities and services in Arab rural areas.

f. Establishing more effective programs to achieve social security in Arab rural areas.

g. Enhancing basic education levels in Arab rural areas and implementing programs to eliminate illiteracy in Arab countries.

h. Designing and implementing a set of participatory development programs in Arab countries.

i. Supporting and increasing the effectiveness of women's participation in sustainable Arab agricultural development.

II-2-11-Civil Society and Private Sector Engagement: This includes the following axes:

a. Increasing the role and contribution of the private sector and civil society organizations in sustainable Arab agricultural development programs, based on the principle of collaboration in the development process, particularly in the following areas:

- Providing production requirements.
- Providing support services for production and marketing.
- Planning, monitoring, and evaluation.
- Agricultural extension services.

b. Establishing regulations within the decisions of the Economic and Social Council of the League of Arab States and the standards that ensure the effectiveness and seriousness of the participation of civil society organizations in Arab agricultural development.

c. Developing Arab legislations regulating the participation of civil society organizations working in the agricultural sector in sustainable agricultural development efforts.

d. Enhancing the capabilities of civil society organizations operating in Arab agricultural sectors to fulfill their roles in areas suitable for serving the Arab agricultural development process.

e. Adopting a contracting principle with civil society organizations in the implementation of Arab agricultural and rural development project programs.

In the context of the fundamental guidelines outlined at the Algiers Summit (2005) regarding the Arab Sustainable Agricultural Development Strategy for the two decades from 2005 to 2025, where guidance and solutions were discussed to achieve Arab agricultural integration and meet the food needs of Arab countries, the future vision of this strategy can be formulated as a strategy aimed at achieving highly economically efficient Arab agriculture in resource utilization. It should be capable of ensuring food security in the Arab world and providing a decent life for those working in the agricultural sector.

Another strategy was developed by the Arab Organization for Agricultural Development to enhance food security for Arab countries, known as the Arab Sustainable Agricultural Development Strategy 2020-2030. This strategy included six main programs, encompassing 19 sub-programs covering various agricultural development areas. It also addresses all Sustainable Development Goals (SDGs) related to the agricultural sector by 2030. These programs are as follows (Arab Organization for Agricultural Development, 2022, P.44):

- The main program for technology transfer and increasing the sustainability of agricultural production and productivity.
- The main program for governance of Arab agricultural resource management systems and their sustainability.
- The main program to enhance the competitiveness of agricultural products and improve the Arab agricultural investment and trade environment.
- The main program for plant and animal health and food safety.
- The main program for rural development, innovation, entrepreneurship empowerment of women and youth, and reducing disparities.
- The main program for building human and institutional capacities and making agricultural knowledge accessible (Knowledge Repository).

When formulating the elements and components of the main programs for the Arab Sustainable Agricultural Development Strategy 2020-2030, the following considerations were taken into account (Arab Organization for Agricultural Development, 2022, P.44):

- Achieving maximum consistency between the strategic objectives and the Sustainable Development Goals 2030, contributing to helping countries achieve their international and regional commitments related to the agricultural sector.
- Interconnection between the programs and the strategic objectives, meaning that each of the proposed programs seeks to achieve one or more of these strategic objectives, either directly or indirectly.

- Achieving as much coordination and integration as possible between the programs with each other and with the programs included in the national agricultural development plans.
- Considering the developmental priorities and strategies of the Arab agricultural development, especially in areas where Arab agriculture suffers from clear deficiencies, whether in resource scarcity or in the limited efficiency of their utilization.
- Logical sequence in implementation, as the implementation of some components necessarily requires the implementation of other components.
- Enhancing the capacity of countries to improve the welfare, income, and social stability of rural populations by adopting sectoral reforms that encourage good governance, transparency, and ease of financing.
- Maximizing the use of existing resources and capabilities while considering the effective utilization of strengths and available opportunities.
- Maximizing the strengths and opportunities available to Arab agriculture and minimizing threats and weaknesses.

The solutions presented by both the Arab Sustainable Agricultural Development Strategy 2005-2025 and the Arab Sustainable Agricultural Development Strategy 2020-2030 are practical solutions, especially for Algeria. Algeria has natural, economic, and human resources that make it self-sufficient in terms of food security compared to other countries in the world. However, what it needs to do is to follow the provisions of these two strategies and fully exploit its agricultural potential.

II-3-Achievements Made by Algeria on the Path to Achieving Food Security

In line with the efforts of the Arab Organization for Agricultural Development to support food security in Arab countries, Algeria has given due attention to the agricultural sector as a means to achieve sustainable food security in all its aspects. This includes bridging the food gap, enhancing rural development, and working to introduce structural balance in exports. Algeria aimed to reduce its dependency on imports of consumer products and achieve sustainable food security. The efforts have been multiplied to provide all the financial, material, and human resources needed for agricultural development to reach its desired goals.

To stimulate agricultural production and improve productivity, the government has formulated new development strategies to open doors for successful development. In addition to the state's efforts, there has been a focus on activating the role of the agricultural sector in the national economy. This has been achieved through the adoption of specific government policies and programs related to agricultural and rural renewal, as well as health initiatives (Arab Organization for Agricultural Development, 2020, P.36).

Thanks to Algeria's adherence to the provisions of the Arab Agricultural Development Strategy for the Two Decades 2005-2025, especially its commitment to the Emergency Program for Arab Food Security Phase II 2017-2021, it has managed to implement the following:

II-3-1-Improved productivity in existing crops:

Implemented and ongoing projects totaling 15, with investment costs for five projects reaching approximately \$844.09 million. These projects aim to:

- Modernize the fodder production sector through the Triple Partnership Program: Farming, Dairy, and Breeding.
- Provide assistance and technical support to institutes, centers, and supervised offices.
- Revive the disposal program (CNIAAG).
- Cultivate an area of 8,000 hectares through the legume and forage seed program (alfalfa and clover).
- Enhance grain storage capacity by establishing 39 silos with a total capacity of 8.2 million quintals.

- Improve grain seed production capacity through the establishment of 17 new working stations.
- Enhance the quality control chain for grain seeds.
- Expand olive cultivation through semi-intensive (200 trees/hectare) and intensive (400 trees/hectare) planting.
- Implement water-efficient irrigation systems to conserve water resources for new areas.
- Provide 6.4 million olive saplings.
- Modernize agricultural technologies in oases.
- Rehabilitate old date palm orchards.
- Substitute 25% of maize with soybeans and 20% of barley.
- Improve the quality control chain for consumption eggs and white meat in terms of slaughter, processing, and packaging.
- Upgrade livestock infrastructure by providing information on agricultural prices and markets.
- Identify international market trends to enable managers to anticipate forthcoming actions.
- Export 700 million eggs in 2019.

II-3-2-Utilizing more land resources to make efficient use of water returns for irrigation and non-traditional water sources:

Three projects are being implemented under this component in the fields of supplementary grain irrigation, efficient irrigation techniques development, and reclaimed water utilization.

II-3-3-Integrated investment projects related to program activities:

Two projects, one costing around \$4.2 million, are in progress. The first project involves establishing an integrated industrial-food hub to coordinate activities between the dairy sector stakeholders in the Skikda region, while the second project is the Investment Program in Control Facilities. Both projects aim to activate a new method of organization and coordination among workers and local dairy product producers and improve grain storage.

Conclusion:

Algeria produces various agricultural crops and raises different types of livestock, including those for meat and milk production. However, despite this diversity in plant and animal production, it still faces deficits in many food groups such as vegetables, fruits, grains, and meat. To fill these food gaps, Algeria relies on imports from foreign countries, relying on its financial resources generated from oil, gas, and other revenue sources.

A country that can meet its minimum food requirements through local production is better off than one relying on imports to meet its food needs. This is due to various factors, including political, economic, and human factors, all of which push food-importing countries to reconsider their food supply strategies.

Study Results:

Among the key findings of this study are the following:

- Algeria imports many food commodities from various countries worldwide to bridge its food deficits, with wheat being one of the prominent food imports.
- If Algeria continues to heavily rely on imports, especially for strategic food items, it could be susceptible to political concessions or economic pressures, including threats to its sovereignty or economic blockades.
- Natural disasters, climate change, population growth, and political disputes between countries are all considered threats to food security for a country that heavily relies on imports to bridge its food deficits.

Recommendations:

- The Algerian Ministry of Agriculture should intervene to eliminate the haphazard production patterns prevalent in agricultural production at the expense of strategic crops.
- Major Algerian farmers and agricultural investors should focus on producing strategic crops and ensure self-sufficiency in these crops to avoid potential consequences arising from food dependence on strategic food items.
- The Algerian Ministry of Agriculture should assist and incentivize farmers, facilitating the export procedures of food crops to neighboring countries and should not be a hindrance to farmers, especially for crops with surpluses.

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