Investing in Agricultural Lands in Southern Algeria as a Strategic Mechanism for Schieving Self-Sufficiency

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Abstract:

The study highlights the significant agricultural potential of southern Algeria, particularly in Timimoun, El Menia, Ghardaia, Ouargla, and Illizi, due to the availability of vast agricultural lands and underground water resources. It examines the role of domestic and foreign investment in exploiting these resources to achieve self-sufficiency in strategic products, especially cereals, while reducing the import bill and diversifying the national economy. Using a descriptive approach, the study analyzes unused agricultural lands and their potential for future wheat and sugar production. The findings indicate the launch of strategic projects, including powdered milk production in Adrar and dry-cereal production in Timimoun. The study concludes that exploiting these lands can create jobs, reduce imports, strengthen food security, and support agricultural self-sufficiency.

Keywords: National Office for Agricultural Development; Agricultural lands for investment; strategic crops; wheat and sugar; self-sufficiency.

Jel Classification Codes: N9؛ J1

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1. INTRODUCTION

The expansion of the world and its division between developed countries and underdeveloped or developing countries, or what are called third world countries; It makes the latter countries subordinate to the West, in all fields, especially the food aspect, despite their possession of all the natural, climatic and human resources and components.

The reality is that the West colonized developing countries, and most of them achieved independence in the middle of the 20th century, but true independence is not actually achieved until the country reaches self-sufficiency in strategic crops of wheat, corn, sugar beets, and legumes.

Algeria is considered one of the countries on the path to growth, It has gone through several reforms in the agricultural field since its independence from the French colonialists on July 5, 1962, For example, but not limited to, the agricultural revolution during the era of the late President Houari Boumediene, who sought to advance the agricultural sector in the country, but This project did not reach its planned results For several reasons, the matter did not stop here.

Rather, Algeria did everything in its power to advance the country's agricultural sector for the purpose of achieving self-sufficiency, especially in strategic crops, The establishment of a single window is the best evidence of that.

Problem of the Study:

Based on the above-mentioned, we can formulate the following problem: **How can investing in new agricultural lands in southern Algeria contribute to achieving self-sufficiency in strategic commodities such as wheat and sugar and reducing their import bill?**

To answer the problem, we will ask the following sub-questions:

- Does Algeria have agricultural potential, especially in the south, that has not yet been invested?
- Does Algeria encourage investment in the agricultural field, particularly in strategic agricultural crops?
- Will the new investment of agricultural land reduce the import bill?

- What is the potential impact of investing in newly developed agricultural lands in southern Algeria on domestic production and the achievement of self-sufficiency in strategic commodités?

Hypotheses of the study:

- Algeria has natural resources in the south, mainly groundwater and agricultural land, which qualify it to develop the agricultural sector, but they have not yet been adequately exploited;

- Algeria seeks to encourage agricultural investment, especially in strategic crops, by enacting strict regulatory laws to reduce bureaucracy in the investment field;

- Investing in new agricultural land will contribute to achieving national self-sufficiency, particularly in wheat and sugar, which will be reflected in a reduction in import bills.

- Investing in newly developed agricultural lands in southern Algeria could significantly increase domestic production and enhance self-sufficiency in strategic commodities by expanding cultivated areas, improving productivity, and reducing reliance on imports.

objectives of the study: Through our study, we seek to achieve the following:

- Highlighting the great agricultural potential that Algeria possesses, especially in the southern regions;

- Showing the facilities and privileges provided by the state to investors in the field of agriculture;

- Highlighting the single window and its role in reducing bureaucracy in the field of agricultural investment;

- Demonstrating the expected yield of wheat and sugar crops in the event that the new agricultural lands offered for investment are exploited;

- Informing investors about new agricultural lands available for investment in the southern regions and explaining their most important features.

Methodology

To address the problem, and analytical we relied on the descriptive approach by H displaying the technical cards for the oceans of the concerned states extracted From the Office of Industrial Development in Desert Lands, then analyzing them and showing the characteristics and characteristics of each region. In the end, the Excel application program as an analytical tool was used to develop a forward-looking study of the crops that could be achieved if investments in crops were used. The strategy.

The descriptive approach was initially adopted to identify the characteristics of the areas under study and to provide an accurate overview of their agricultural potential and resources. This was achieved through the collection of data and information contained in the technical data sheets pertaining to the areas located within the countries under investigation. These data sheets were obtained from the official authority responsible for industrial development in desert areas.

Depending on the scope and objectives of the study, the technical data sheets include a range of indicators, such as:

- The total area of the regions under study.
- The areas suitable for agricultural exploitation.
- The nature and characteristics of the land.
- Available water resources.
- Climatic conditions.
- Temperature levels and precipitation amounts.
- Soil characteristics and quality.
- Agricultural crops that can potentially be cultivated.
- Available infrastructure.
- Agricultural investment potential.
- The number of investors or existing projects, where data are available.
- Expected productivity levels of different crops.

This component aims to establish a descriptive basis that facilitates an understanding of the differences among the areas and countries under study before proceeding to the subsequent stages of analysis and forecasting.

Limitations of the study: The boundaries of the study were the period extending from May to the end of June of the year 2025,This is done by accessing websites affiliated with the Ministry of Agriculture, and discovering advertisements announced by the Development Bureau related On agricultural land directed to investors, Hence, future forecasts for agricultural crops were built in the event that these new lands were exploited.

Study structure: The study's structure was based on two variables, The first variable is that there are new agricultural lands in the south for investment, and applicants can access the digital platform of the Office for Industrial Development in Desert Lands to obtain all relevant data, The second variable is that if these new lands are invested in wheat and sugar, they will achieve significant returns in 2026, which will enable them to reduce the country's import bill and thus achieve self-sufficiency in the long term.

Previous research and studies:

- **Study** (Farouq & HEMISSI , 2024) :This paper examines the relationship between self-sufficiency and food security, While some food self-sufficiency benefits food security, a strict focus on subsistence production goes beyond domestic production; It requires access to stable and affordable food supplies, despite international trade, This paper calls for a balanced approach that includes local production and strategic business partnerships for a more sustainable and resilient food security strategy.

- **Study** (Faiza, 2024) This study aimed to clarify Algeria's position on achieving food security and the extent of its adoption of agricultural development policies, and this is through encouraging support and

promotion of technology in the agricultural field as a mechanism for achieving sustainability, found out that the radical solution for a sustainable food security in Algeria is increasing and improving the productive capacity of the crops through the orientation towards the smart agriculture that depends mainly on the modern technological tools and the Artificial Intelligence systems.

- **study** (Hayet & Kalakhi , 2024): aims to clarify Algeria's efforts to develop the agricultural sector as one of the main alternatives outside the fuel sector .to achieve this, it is necessary to adopt economic policies and strategies and implement them in a comprehensive and integrated manner in cooperation between the government, the private sector and civil society to achieve food security.

2. Results And Discussion

The first axis: The legal and regulatory framework for desert agriculture:

Algeria is distinguished by its large area and is considered one of the largest countries in Africa. In terms of area, it is estimated at two million three hundred and eighty-one thousand seven hundred and forty-one square kilometers. Algeria is distinguished by the diversity of its terrain and climate, including humid coastal, inland, and dry desert areas. It is also distinguished by its large underground water reserves. Vast agricultural lands can be Algeria's food basket. To encourage investors to reclaim these lands and pay attention to strategic crops, Algeria worked on :

2.1. Establishment of the Office of Industrial Development in Desert Lands:

According to what was stated in Article 1 of Executive Decree No.20-265 of Safar 4, 1442 AH, (Official Gazette of the People's Democratic Republic of Algeria, 2020)corresponding to September 22, 2022 AD, the Bureau will establish its headquarters in the desert lands in the state of Al-

Mania, symbolized by ODAS, and subject to the guardianship of the Minister of Agriculture. It has several tasks, including:

- Paying attention to agriculture and strategic industry for the purpose of reducing imports;
- Promoting and encouraging desert land reclamation;
- Determine the real estate base for reclamation;
- Fragmentation of agricultural oceans according to the technical study;

In addition, the Bureau grants the oceans destined for reclamation to investors, in accordance with the conditions set for that, with the appointment of their beneficiaries. As for management, the Bureau is managed by a board of directors under the supervision of a general director and with the assistance of an expertise committee equipped with a single window.

2.2. Single window and digital platform:

(The single window is an office where the investor can find all the documents related to the project without the hassle of moving from one place to another. To facilitate the process more, a digital platform has been created that contains all the data)

For the purpose of facilitating all administrative procedures for investors, and overcoming all obstacles and bargains to which they may be exposed due to bureaucracy , and administrative and financial corruption in some sectors in general and the agricultural sector in particular, the state has established a single window that is accessed through the digital platform and is responsible for linking various departments for the purpose of facilitating the launch of projects and accompanying investors and informing them of the most important Various advantages in the field of investment, For the purpose of submitting investment applications, fill out, the platform form. (The digital platform for submitting investment applications for agricultural projects of a strategic nature , 2025).

2.3. Projects of a strategic nature:

According to the aforementioned executive decree, the projects that reduce the import bill , and achieve food security for the country are called strategic projects, and among the most important products that fall under it are grains of various kinds, fodder, meat, and milk.

The second axis: Agricultural lands allocated for investment in desert agriculture:

Real estate oceans are advertised for the purpose of investment through the media channels of the Bureau as well as the agricultural directorates affiliated with the Ministry,For the purpose of discovering the importance of investing in real estate oceans, we will attempt to analyze the most important characteristics, privileges, and content of the declared oceans directed to agricultural investors, whether from inside or outside the country For the purpose of submitting their files from May 15, 2025 until June 4, 2025, which contains 17 areas divided into five states with a total area of approximately 48 thousand hectares, we will distribute them into two regions:

2.3.1. The first region:

It includes the state of Al-Mania, which contains five oceans with an area of more than 15 thousand hectares, Ghardaia with a single ocean occupying an area of more than seven thousand hectares, and finally Timimoun, which is distributed over three oceans with a total area of five thousand hectares, shown in the following table:

Table 1. An extract from the technical card of the agricultural lands proposed for investment in the regions of Menia, Ghardaia and Timimoun.

State		**El Meniaa**					**Ghardaia**	**Timimoun**		
PÉRIMÈTRE		**Ariguet El Meslane03 superficie 1250**	**Lmhareg Elhomor**	**Ariguet El Meslane**	**Ariguet El Meslane 03**	**Loufila 02**	**Chebargua**	**Superficial Aougrout Plateau**	**Tinerkouk Kebir area**	**MGUDEN 01**
Area in hectares		2011	7140	2984	1250	2298	6750	500	1000	3500
GEOGRAPHIC COORDINATES	**Longitude Y**	4,118	3392238	2,010	429971	4,127	4,135	3220245,76	3246370,70	3302396,05
	Latitude X	31,174	544805	30,014	3333684	31,298	31,805	305594,58	282871,95	381980,41
AVERAGE FLOW RATE (APPROXIMATE) liters/second		35-45	35-45	35-40	35-40	35-45	35-40	30	30	50
DEPTH (meter)		450-600	350-450	150-200	150-200	450-600	450-600	250	250	150

Source: Prepared by researchers based on data extracted from the Office of Industrial Development in Desert Lands.

Through the technical cards of the oceans we observe

First: Al-Manea includes 5 areas that differ in terms of breadth, as we find that the circumference of the Red Paths is the largest of 7 thousand hectares, and the smallest is Erekat Al-Mashlan 3, at about one thousand and three hundred/ha,We can also notice that the depth of water from the surface of the earth is estimated at one hundred and fifty meters to six hundred./m and sometimes to less than that at ground level, with a water flow of up to 35 liters/second.

Second: Ghardaia is characterized by almost the same characteristics as the impregnable surroundings, except that it is the closest distance to the municipal headquarters and the electrical network.

Third: Timimoun, in terms of ocean features, we note that it is better than the aforementioned areas due to its proximity to the main road in addition to the quality of surface relief in most New agricultural investments. As for the depth of water on the surface of the Earth, it does not exceed two hundred and fifty meters, and most often reaches only one hundred metres. The average flow reaches 50 liters per second, which is a large amount compared to the rest of the New agricultural investments.

2.3.2 The second region:

It includes two states, Ouargla, which has been allocated six agricultural lands with a total area of more than 8 thousand hectares, and Illizi contains two oceans with a total area of approximately 12 thousand hectares, shown as follows :

Table No.02 An extract from the technical card of the agricultural lands proposed for investment in the Ouargla and Illizi regions

City		Ouargla						ILLIZI	
PÉRIMÈTRE		Rebaia	Shane 02	Extention Hassi Lahdaou	Hassi Lahdjar	Hassi Lahdaou 2	M'hadhi Fayjet Elbaguel	Roud Enoss 01	Fayej Ben Mrah
Area in hectares		4263	742	500	400	2000	734	7471	4332
GEOGRAPHIC COORDINATES	Longitude Y	3570218	3587992	3333521	3497177	3374412	3419464	3295189	3295352
	Latitude X	765409	743569	252883	676652	268219	262210	252533	246687
AVERAGE FLOW RATE (APPROXIMATE)L/S liters/second		25	25	35	20	35	35	30	20

Source: Prepared by researchers based on data extracted from the Office of Industrial Development in Desert Lands

Through the table we note:

First: this New agricultural investments differs from another in terms of area and proximity to anchored entrances, as well as the distance to the electrical network. For example, the vicinity of the quadrilateral in Ouargla, the distance between it and the electrical network is only four to five kilometers. As for the agricultural efficiency of crops, it is annual in proportion to the quadrilateral area, and annual and permanent crops and trees, Fruitfulness in proportion to the circumference of a fort2, and even the possibility of planning to improve the soil and agricultural property of these oceans Although these areas suffer from a somewhat weak level of water flow compared to the oceans of Illizi, as in some areas it does not exceed 20 liters/second, and in terms of depth it is the closest 180 meters to the surface of the Earth, while in Illizi the closest depth is 450 meters and sometimes reaches 800 meter in other areas, and this is despite the high level of water flow, which reaches 35 liters/second .

Through the tables and technical cards related to the proposed stations within the framework of investment and reclamation of declared lands distributed over 5 states, we conclude the following :

The total area is 47875 hectare, divided into 17 perimeters

- Any agricultural investor, whether national or foreign, can discover the most important features and location of the agricultural property based on the latitude and longitude coordinates published in the ocean technical card

- The oceans vary from one region to another in terms of area, depth, and water flow level, as well as proximity and distance from the main road and the electricity network.Available service stations

- All regions are located in the Algerian desert and are characterized by a dry climate throughout the year and high temperatures in the summer

- Although the areas are desert, they possess a large underground water reserve that saves them from rainfall and maintains the continuity of agricultural crops

- The average flow in some areas reaches 50 liters/second as the vicinity of Imqeden in Timimoun.

- The level of water depth varies from one region to another, with the Timimoun region being the closest and Illizi being the deepest.

- Most of the oceans are flat and sandy, with the possibility of improving the soil and agricultural land there The agricultural crops of some female investors are diverse, such as grains of various kinds, fruits, and trees, and are throughout the year Since the areas are desert and characterized by high temperatures and very low humidity, with strong winds, the evaporation rate will be significant.

3. The second axis: Future prospects expected in 2026 if 17 new agricultural investments are exploited in wheat and sugar production:

3.1.Grains (wheat):

- Algeria is considered one of the largest grain consuming countries in the world, according to statistics Worlds Top Export Organization: In 2022, Algeria imported $2.7 billion worth of wheat. This is equivalent to 3.7% of the total wheat imported globally and ranked second in the Arab world after Egypt, and during the 2023-2024 season, and according to data extracted from the Food and Agriculture Organization of the United Nations, Algeria imported approximately 9 million tons of wheat during the years 2023 and 2024.

- Accordingly, based on the above, we will conduct a forward-looking study of the yield of the agricultural area declared in May and June 2025 by the Office of Desert Development and Industry regarding its use in grain production, and the extent of its contribution to production and reducing the import bill, noting that the average production per

hectare, according to Diwan statistics, may be between 70 and 90 quintals per hectare, and sometimes exceeds 100 quintals per hectare in some areas.

Table 3. Shows the expected grain production for the year 2026 in the event that new agricultural lands are exploited by investors in each state.

City	Area in hectares	Production ranges from 70 to 90 quintals per hectare	Average production The unit is quintals per hectare
El Meniaa	15683	From 1097810 To 1411470	1254640
Ghardaia	6750	From 472500 To 607500	540000
Timimoun	5000	From 350000 To 450000	400000
Ouragla	8639	From 604730 To 777510	691120
Illizi	11803	From 826210 To 1062270	944240
Total	47875	From 3351250 To 4308750	3830000

source: was Prepared by researchers based on previous data

According to the table, although Algeria imports a large amount of wheat, the new reclaims may cover the following according to each state :

1.Al-Maneiaa production will be more than one hundred and twenty-five thousand tons, meaning it will cover 1.39% of Algeria's wheat imports

2.Ghardaia will produce fifty-four thousand tons, meaning it can cover 0.60% of imports

3.Timimoun, the crop will be forty thousand tons, meaning 0.44% of imports can be covered

4.Ouargla production will be more than sixty-nine thousand tons, meaning 0.77% of imports can be covered

5.Finally, the state of Illizi will produce more than ninety-four thousand tons, meaning it will give 1.05% of the imported wheat.

From the above, it can be said that the new lands, if reclaimed for wheat cultivation, will reduce the import bill by about 383,000 tons, or 4.26% .

3.2. Sugar beets :(Sugar beet is a raw material used in sugar extraction)

Algeria is considered one of the largest sugar importers in the world, as it annually imports more than 2 million tons of this substance. This number makes Algeria rank fourth in the world according to the latest report of the National Organization for Consumer Protection, despite the health risks of excessive consumption of sugar of various kinds. We also find the large bill allocated for this Therefore, the state seeks to invest in growing sugar beets and consider them a strategic crop similar to grains of various types. According to information from the Ministry of Agriculture, the yield of beet production reached between 75 tons in the year 2020, with the sugar concentration reaching 27%.If the agricultural properties declared by the Development Bureau were exploited in the production of sugar beets, we would obtain the following :

Table 4. Shows the projected sugar production for 2026 if new agricultural lands are developed by investors in each state.

City	El meniaa	Ghardaia	Timimoun	Ouragla	Illizi	total
Expected sugar beet production (unit in tons)	1176225	506250	375000	647925	885225	3 590,625
The expected sugar production rate is 27% (unit ton)	317580.75	136687.50	101250.00	174939.75	239010.75	969468.75
Percentage of contribution to reducing the sugar import bill	3.53%	1.52%	1.13%	1.94%	2.66%	10.77%

Source: was Prepared by researchers based on previous data

From the table we notice the following :

The expected sugar salamander production in Mania and Timimoun exceeds one million six hundred thousand tons and can produce more than four hundred thousand tons of concentrated sugar. This production can cover an estimated 4.65% of imports, while in the state of Ghardaia more than five hundred thousand tons will be produced. Of sugar salamanders, it can cover 1.52% of the imported quantity As for Ouargla and Illizi, it can produce more than one million five hundred thousand tons of sugar salamander, and it can produce more than four hundred thousand tons of concentrated sugar, and this production can cover an amount of 4.60% of the imported quantity. Accordingly, reclaiming more than 48 thousand hectares for all invested oceans will enable the state to produce up to one million tons of concentrated sugar, which will enable it to reduce the state's import bill by 10.77% .

Conclusion

Through what was discussed, we reached the following results:

Algeria is very large and diverse in terms of area and climate, which will help it diversify its agricultural crops, especially strategic ones

Despite the dryness of the desert areas in Algeria, they have the largest underground ocean of water, which enables them to irrigate agricultural crops comfortably

Establishing the Office of Development and Industry and the single window will reduce mediations and bureaucracy and encourage investors in the field of agriculture

Establishing technical cards for the oceans to be exploited and containing all the data related to the plot of land will enable investors to know all the details of the plot without the hassle of moving to it.

Therefore, we can prove the following hypotheses:

- Yes, Algeria has natural resources in the south, mainly groundwater and agricultural land, which qualify it to develop the agricultural sector, but they have not yet been adequately exploited;

- Yes, Algeria seeks to encourage agricultural investment, especially in strategic crops, by enacting strict regulatory laws to reduce bureaucracy in the investment field;

- Yes, Investing in new agricultural land will contribute to achieving national self-sufficiency, particularly in wheat and sugar, which will be reflected in a reduction in import bills.

Recommendations:

Studying history in the 18th and 19th centuries, it is noted that Algeria was an exporter of wheat instead of importing it, but rather it was called the African grain developer, and to revive this time it is obligatory for the state:

- Expanding land reclamation in the desert and providing all appropriate conditions for investors;

- Encouraging the one-stop-shop initiative;

- Providing all appropriate conditions for foreign investors in the field of agriculture and encouraging them to transfer technology and mechanization in the agricultural field;

- Fighting all forms of bureaucracy that would hinder investment in agriculture;

- Accelerating the construction of the railway in the south and linking it to major agricultural investments, which will facilitate the transport of agricultural crops;

- Accelerating the connection of new agricultural investments to electricity, which will facilitate the use of groundwater in agriculture for investors;

Establishing grain storage warehouses near agricultural investments in the south, which will contribute to preserving agricultural crops from spoilage

References

Faiza, B. (2024). The modern agricultural technology as an imperative to achieve the food security and well-being in Algeria amid the global developments. *ournal Of North African Economies, 20*, 47.

Farouq, B., & HEMISSI , H. (2024, june). Achieving Food Security in Algeria Balancing Self-Sufficiency with Strategic Trade. *Journal of Finance, Investment and Sustainable Development, 9*, 42.

Hayet, S., & Kalakhi , L. (2024). The reality of the agricultural sector and the most important policies adopted in Algeria to achieve sustainable food security. *Afak for sciences journal, 10*, 174.

Official Gazette of the People's Democratic Republic of Algeria. (2020, September 27). Official Gazette of the People's Democratic Republic of Algeria N57. Algeria, Algeria.

The digital platform for submitting investment applications for agricultural projects of a strategic nature . (2025, 5 17). Retrieved from https://odas.madr.gov.dz/formulaire-timimoun5 : https://odas.madr.gov.dz/formulaire-timimoun5