



Food Security in Egypt

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Introduction

The issue of food is a political pillar in the Egyptian economy because it is closely linked to the process of economic development. On the one hand, political and social stability is an issue of many aspects, directly or indirectly linked to several different sectors and institutions in the country, but it is mainly related to the agricultural sector, especially in light of the limited natural resources and the continued increase in population, and thus increased demand for food.

Food security is one of the most important national security issues, and therefore countries strive to achieve their food security as much as possible through their local production, given the risks of external sources, especially economic fluctuations. Countries usually direct their agricultural and food policies to provide strategic commodities from local sources, and the state's presence within economic blocs at the regional level allows them to securely provide their food needs.

In achieving its food security, Egypt suffers from the problems of dependence on the outside to provide many major food commodities, which causes the exacerbation of food subsidy problems, which are related to the deficit in the balance of payments, and thus the depletion of foreign exchange reserves. Therefore, the issue of food in Egypt cannot be viewed in isolation from the issue of food at the regional and global levels.

Food Security (Concept, Dimensions, Indicators)

The concept of food security emerged in the wake of the global food crisis in the first half of the 1970s, meaning the ability of different populations in any country at all times and in all places to have adequate food for health and wellness and productive life at a cost within the purchasing power limits of these people. Thus, they differ from the concept of inventory policy, which refers to the need to provide sufficient strategic stock of food for about four months imposed by political, economic and military considerations. Therefore, food security refers to the long term while inventory policy refers to the short term in terms of food provision.

Several regional organizations and the State adopt a special concept of food security, because of the increasing importance shown by societies towards this issue, because this issue has affected the general



national security as well as the situation of some social groups, especially low-income people, and organizations and institutions with their definitions of food security: The World Bank for Reconstruction and Development, the Food and Agriculture Organization (FAO) and the Arab Organization for Agricultural Development, **as follows:**

1. International Bank for Reconstruction and Development (IBRD): defined food security as the possibility of all individuals at all times to have access to adequate food for their activity and health. the food security of a country is achieved when this country, with its marketing and commercial organizations, can provide all citizens with adequate food at all times, even in times of crisis and in times of deteriorating local production.
2. FAO: It believes that food security is achieved when all individuals at all times have the physical, social and economic ability to obtain a sufficient and safe amount of food to meet human energy needs and related to food preferences to ensure a healthy life, and this definition is consistent with the definition of the "World Bank" in both material basis and temporal inclusion. It does not require the source of food, whether from local production or imports, or both, but it differs in its requirement that food is an essential factor in a healthy and active life.

The definition refers to the following dimensions of food security:

1- Food availability

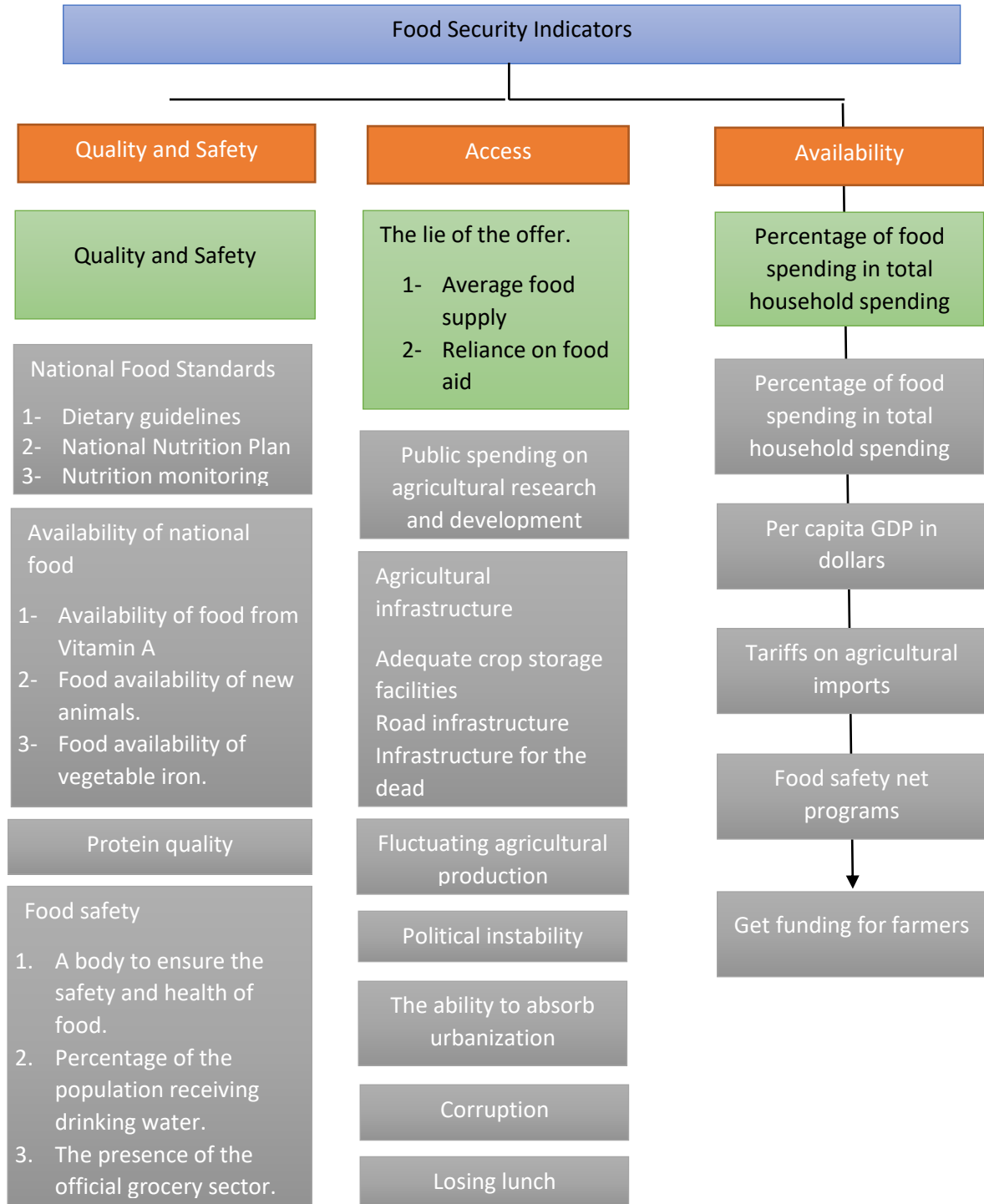
Availability means the availability of sufficient quantities of food of appropriate quality, through domestic production or imports (including food aid). The availability of food is achieved when there are sufficient amounts of food always available to all individuals within the state and this food can be obtained through home production or other local sources.

2- Access and dedication to food:

Access to food means that the individual (consumer) has access to, owns and benefits from food, i.e. individuals have access to appropriate and adequate foods to follow a diet. food access is guaranteed when families and individuals have sufficient resources to obtain the right food for a healthy diet, which depends on the disposable income of the family, its distribution within the family, and food prices.



Food Security Indicators



Source: Central Agency for Mobilization and Statistics, Study of Food Security Economics in Egypt (2005-2016), Cairo 2017, p. 133



The Most Important Current Challenges to Global Food Security

Widespread Nutritional Deficiencies and Malnutrition:

Undernutrition is one of the most important challenges to food security worldwide, with 821 million people suffering from undernutrition in 2017, compared to about 804 million in 2016, an increase of serious concern and a challenge to international commitments to end hunger by 2030.

Malnutrition ranges from acute undernutrition to excess weight and obesity, thus affecting humans throughout the life cycle, from pregnancy to old age, malnutrition may be the result of deficiencies in macronutrients or micronutrients, or an immediate need for access to food, and excessive eating and calorie intake leads to weight gain and fat accumulation.

Indicators of the prevalence of malnutrition during 2017 indicate the multiple burdens resulting from it, with about 151 million children under the age of five worldwide sufferings from stunted growth, about 51 million children worldwide suffering from emaciation, a total of 7.5% (moderate and severe) and about 5% suffering from moderate emaciation, and about 2.4% severe emaciation. There are 38.3 million children under the age of five in the world who are overweight.

Food Insecurity:

Food insecurity is one of the most important challenges facing the world. despite international efforts to address the issue, around 768.4 million people are still suffering from severe food insecurity in 2017, a significant increase from 666 million in 2016, an increase of 103.4 million in a year.

Sub-Saharan Africa is one of the world's most food-insecure regions.

Climate Change:

Climate change remains one of the most important challenges to food security, with climate techniques and changing climatic conditions affecting agriculture and food production, and as a result, all



dimensions of food security and nutrition, including food availability, access, use and stability, are likely to be affected, supported by a relationship between climate techniques, extreme weather conditions and food security and nutrition indicators.

To illustrate the relationship between climate techniques, extreme weather conditions and indicators of food security and nutrition, we will mention some cases. Severe droughts in Bangladesh have contributed to a high rate of stunting within five to nine months of the onset of drought, and in rural Zimbabwe, children between the ages of one and two face a sharp decline in growth speed compared to their peers of the same age who live in areas where rainfall is moderate.

Severe droughts also affect the availability of food in countries, particularly countries with poor agricultural production, affecting adequate food measures in these countries, and countries are trying to offset losses of domestic production through imports, although supplies are often limited, and in general the emerging shortage of agricultural production harms food security and nutrition in the short and long term.

Armed Conflicts:

It is noteworthy that the prevalence of hunger in countries affected by armed conflicts increased compared to its prevalence in other countries, with rates ranging between 1.4% - 4.4%. The prevalence of hunger in countries that suffer from institutional or environmental fragility increases by between 11%-18%, Also, people living in countries experiencing prolonged armed conflict are two and a half times more likely to be undernourished than people living in other countries.

Scarcity of Water Resources:

Many regions suffer from water scarcity, especially in the Arab region. This scarcity is exacerbated at all levels over time, and it is noteworthy that water scarcity in the Middle East and North Africa can be either a destabilizing factor or a motive that brings communities closer together, as it depends on the policies taken to deal with this growing challenge. Water scarcity also affects traditional livelihoods such



as agriculture, and the result can be food insecurity and people's forced migration, as well as growing frustration, which could become another driver of widespread instability in the region.

Egypt's Food Gap Until 2014

Egypt imported all basic food commodities, mainly grains, food oils and sugar, as well as dry legumes, red meat, milk and fish.

The rates of self-sufficiency of cereals, food oils and dry legumes have fallen to high-risk levels. Overall, self-sufficiency was about 40%, and the food dependence rate was 60%.

There were many reasons why the food gap was so high until 2014.

Political and security instability can raise the level of production, especially agricultural production.

Large areas of agricultural land were bulldozed and agricultural land decreased during the January 25, 2011 revolution, as a result of insecurity and inability to prevent abuses and control the security situation.

Low oil prices globally, resulting in lower revenues of oil exports and their derivatives, and thus a decrease in the supply of dollars, resulting in a decrease in the state's ability to import basic foodstuffs and an increase in food prices, especially imported, resulting in a decrease in the ability of individuals to provide for their food needs.

Egypt's low food security rates required restructuring the agricultural sector to produce more food and make better use of soil and water, and it was unacceptable that wheat self-sufficiency would be reduced to 30% (we import 12 million tons) because of increased profits for farmers from growing clover on wheat.

The productivity of beans has decreased to 30%, and lentils are not grown after the increase in their price. agricultural land is not empty in summer, yet we import 100% of our food oil needs and 70% of corn (we import 8.6 million tons) both summer crops, crop areas were limited to growing rice within 1.5 million acres, and cotton in an area of a quarter of a million acres, which is high in water consumption.



There were three main reasons behind this unsafe food situation, namely limited resources for food production, specifically, water and land failed economic and agricultural policies, and population growth. these same reasons over time will lead to a further deterioration in food self-sufficiency rates and appropriate policies.

Water conservation policies have become necessary in anticipation of global warming and the impact of saltwater on the delta, including the Egyptian delta, and to produce more food from less water and require urgent action, both in water transport systems through opening mud and sand channels or irrigation regulation in the fields.

Egyptian State's Efforts to Achieve Food Security

The issue of food in Egypt is one of the most important objectives of the economic and social development strategy until 2030, which should be focused on due to the many causes and challenges facing this sector, the most important of which is the increase in the population and thus the increase in demand for food, given the limited agricultural resources available, land and water.

A decline in self-sufficiency has recently been observed, especially for the group of basic food commodities such as grains, wheat, corn, legumes, vegetable oils and sugar, leading to increased reliance on imports to meet most of their food needs.

Egypt seeks to achieve food security through several key axes through the state's adoption of the following:

- 1- Increasing self-reliance in the provision of strategic food commodities so that it approaches the self-sufficiency of some imported food commodities, especially fruits, vegetables, rice, poultry and fish, and now with the narrowing of the consumption gap in wheat, sugar and corn.
- 2- Developing consumption patterns to improve nutritional levels and increase per capita consumption of food commodities of high nutritional value.



- 3- Reducing food losses and linking farms to markets.
- 4- Establishing an independent food safety body headed by the Council of Ministers to develop a national system for the research of food pollutants in food, especially in the production phase and aftermarket access.
- 5- Developing social safety nets and providing affordable quality food for poor families, especially women and children, to consume enough healthy and nutritious food.
- 6- Developing the animal production sector by paying attention to animal health, providing vaccines, adopting new methods in the production of high-yield strains, animal registration, and control of epidemic diseases.

The Most Important Agricultural Development Projects

Promoting Egypt's agricultural sector is a project of 100,000 agricultural greenhouses.

The real renaissance and overall development of the country will only be achieved by promoting the agricultural sector in Egypt, and in this regard, the Egyptian government launched several national agricultural projects, including the project 100,000 greenhouses, which was launched as part of the project of one and a half million acres, and was the starting point of the national project in early June 2016.

The project aims to create integrated agricultural development communities, as well as the rule of the concept of superior quality of fresh produce, free of pollutants, and provide cut flowers in local markets in quantities that allow for increased circulation. The agricultural project achieves to maximize economic returns by increasing the production of crops, shortening the unit of area used for agriculture, and providing the quantities of water used in agriculture where protected crops consume from 60% to 70% of the water consumed by traditional exposed crops.



The project began on an area of 100,000 acres, based on the distribution of the national land reclamation project, where it will be implemented as follows:

- (1) Construction of 20,000 greenhouses in the western Minya region, to grow tons of peppers, cucumbers, cantaloupes, eggplants, spring onions, zucchini and red cabbage.
- (2) Construction of 10,000 greenhouses in the western Minya region, 10,000 in the Al-Maghara area to grow crops of tons of cucumbers, eggplants, cantaloupes, peppers, watermelons, zucchini and cut flowers.
- (3) 20,000 greenhouses will be set up in Sinai to grow tomatoes, eggplants, cantaloupes, peppers, lettuce and cut flowers.
- (4) Al-Marshada 1 and al-Marshada 2 areas include the construction of 30,000 greenhouses to grow tomatoes, peppers, beans, cantaloupes and cucumbers.
- (5) Construction of a thousand greenhouses in Halaib and Shalatin area to grow tomatoes, cucumbers, eggplants, cantaloupes, peppers, zucchini and cut flowers.
- (6) The first phase of the national project of 100,000 greenhouses will cost about 40 billion pounds, in order to build 40,000 huge greenhouses on the land of the one and a half million acres project, where the single greenhouse costs nearly one million pounds, as it is equipped at the highest level by providing irrigation lines, lighting, ventilation and fans.
- (7) The Arab Manufacturing Authority manufactured 514 greenhouses, 68 agricultural houses in the village of Al-Amal, east of Ismailia, and 40 other agricultural houses for officers of the Tell El Kebir Row.
- (8) There is a study of the construction of 10,000 agricultural greenhouses in the Area of Farafra.

One And a Half Acres Project

The 1.5-million-acre project is the first critical step towards the future of "sustainable development" through which a model for the modern Egyptian countryside will be established.

The project was created in dealing with problems affecting the agricultural area by increasing it by 20% as the land allocated to the project was distributed throughout the Republic. It aims to reduce the food gap and increase the area of inhabited land by building residential communities equipped with the latest technology around agricultural areas. The 1.5 million acres project is an addition to the area of



development of the mass concerned with the packaging and manufacture of food and beverages in addition to agricultural development, which is the backbone of the project.

The project also aims to create residential communities to attract foreign investors and local workers.

Educational and medical services are also provided in the vicinity of these areas.

The reclamation project is one and a half acres of leading agricultural development projects to secure food, create urban communities and create jobs for the youth sector by working to put land to them and provide facilities for investors.

Fish Farming Project

The Fish Farming Project in East Port Said, of the Suez Canal Aquaculture and Aquaculture Company of the Suez Canal Authority, is one of the projects for the development of the Suez Canal and Sinai regions and the creation of jobs for young people.

The fish farming project is the promise of good, a step towards self-sufficiency of fish, where fisheries in the Arab Republic of Egypt represent an important sector of the national economy, yet the rate of fish production in Egypt suffers from a severe shortage. It does not reflect Egypt's seas, lakes, Nile river and fish farms. Annual per capita fish consumption in Egypt is also low compared to the per capita set by the World Health Organization (WHO), due to a decrease in per capita fish consumption in Egypt due to a lack of fish production.

Over the past two decades, Egypt has experienced a major boom in the cultivation of freshwater fish such as tilapia, while marine farming has not followed the same trend as freshwater aquaculture. However, the need for marine aquaculture seems severe and severely needs a number of reasons, including low fresh water in Egypt, limiting it to irrigation activities only without being used in fish farms, and determining Egypt's share of the Nile water and its strategic dimensions related to Egyptian water security.

The fish farming project is the largest in Egypt's history and aims to bridge the gap between production and consumption, achieve the equation, and not resort to importing.



- Fish farming projects in east Port Said include 5,906 basins distributed as follows: Farm A with 3521 fish farming ponds on an area of 9,500 acres, farm B with 1,810 ponds on an area of 4,898 acres, and farm C with 575 ponds on an area of 1,592 acres.
- The executive position of the first phase includes an area of 14,398 square meters with a total of 5,331 ponds, and the implementation of the fish farms project in Daba area west of Port Said on an area of 203 acres through two phases; the first covering 107 acres with a total of 60 ponds and has been implemented by 100%. The second phase is currently being implemented on an area of 96 acres with a total of 12 basins
- The project includes 4,000 marine fish ponds and hatcheries to produce 160 million larvae and 500 million shrimp larvae annually. The project also includes a nursery for the preparation of 160 million finger fish and 300 million shrimp larva per year, a feed plant to produce 150,000 tons of feed annually, and a fish sorting, processing and packaging plant.

Toshka Project Development

Toshka cultivates 143,000 acres within the 1.5 million acres project

The West Al Marashdah area is 25.5 thousand acres plus another 18,000 acres in the same area.

The next phase will witness the intensification of the work of all ministries to speed up the completion of the general and operational plan of the Toshka project, which could be a destination for Egyptian and Arab investment and become the nucleus of joint Arab cooperation. One of the most important national projects, pointing out that the region has a comparative advantage rarely found in similar projects because it is about to form a distinct pattern of pollution-free climate, water resources and land, which is one of the controls of all future activities of the project.

President Abdel Fattah al-Sisi has tasked the government, represented by the Ministry of Agriculture, Irrigation, Housing, Transport and Electricity, to speed up the completion of the Toshka project. He added that all the national infrastructure needed for the project must be completed to be the most attractive for integrated investment and diversify the various activities in the project to take advantage of the region's assets in agriculture to provide young people and social groups with jobs. The government



looks forward to establishing a higher council to manage a project whose mission is to facilitate agricultural investment procedures and allocate an area for agricultural manufacturing.

The new canal on Directory 1 and 2 will be completed in the Toshka project next August. The new 11-kilometre canal, costing 120 million pounds, will contribute to the water savings needed to cultivate 60,000 acres within the project's land which aims to reclaim and cultivate 530,000 acres.

New Delta Project

In light of the government's efforts in implementing the Sustainable Development Strategy and Egypt's Vision 2030, the President's initiative to launch a new national integrated agricultural development project called the "New Delta Project", for reclamation and agriculture of more than a million acres.



It aims primarily to achieve food security and meet the requirements of the continuing increase in the population of food commodities, and to reduce dependence on the import of strategic food commodities, especially in light of the shown utmost importance to the agricultural sector by the Corona pandemic, which prompts countries to redraw their plans in agriculture.

This giant national project is characterized by its genius location because of its proximity to the old delta and its proximity to the road and port network and connects a number of provinces and will then contribute to the redistribution of the population and attract a large number of citizens to reduce the overpopulation in the valley and delta. Additionally, it provides a lot of jobs in all aspects of activities



whether agricultural, animal or industrial agricultural activities, as well as their association with the establishment of integrated housing communities.

Conducting an inventory of 688,000 acres west of the 500,000-acre Future of Egypt project located north and south of the Dabaa axis, which has already begun to be implemented by exploiting the Dabaa area and the groundwater available in the area, where 200,000 acres have been cultivated, is currently expected to reach 350,000 acres from 2022.

In addition to other projects underway in other areas of north and central Sinai, Toshka, the New Valley and the Egyptian countryside, which may increase the total area added to agricultural land within two years to more than two million acres.

Egyptian Exports During the Corona Pandemic

Egypt's exports of vegetables and fruits increased despite the global Corona pandemic. However, the demand of European countries for Egyptian products began to increase, as the Department of Vegetables and Fruits confirmed that Egyptian production began to invade European markets, especially citrus fruits, garlic, fruits and onions.

Despite the increase in the export rate, the Egyptian market continues to maintain an increase in the supply ratio for all items, with most items experiencing a 20-30% drop in prices.

Lifting the Ban on Egyptian Products

The agricultural quarantine report of the Ministry of Agriculture revealed the lifting of the ban on some agricultural exports and the reduction of the rates of additional checks imposed by EU countries on some Egyptian agricultural exports, including the lifting of the ban on all Egyptian exports to the Arab Gulf states, as well as resume the export of Egyptian onions to Saudi Arabia.

The report added that the strawberry and grapes crop was removed from the list of crops that were subjected to additional checks at EU ports, where it underwent an additional screening rate of up to 10%



for more than 7 years, and removed the grape crop from the list of crops that were subjected to additional checks at ports. The European Union has undergone an additional 20% examination rate.

Egypt was able to rank first in the world in the export of oranges, surpassing Spain, which was a world leader in the export of oranges, and remained on this throne for long periods, an unprecedented achievement, where the total volume of Egypt's orange exports by the end of 2020 was about 1.6 million tons.

Egyptian agricultural crops exported to EU countries recorded about 1.009 million tons from September to May of the 2018-2019 season worth \$571 million, and to European countries outside the EU through the export of about 924 thousand tons during that period.

Citrus exports accounted for 46 per cent of agricultural crop exports during the past nine months of the current export season by about 1.763 million tons, valued at \$690 million, accounting for 38 per cent of the total value of the sector's exports, and fresh potatoes accounted for 17 per cent of the total. Exports amounted to 662,000 tons worth \$247 million, accounting for 13 per cent of the total value of agricultural crop exports.

Exports of fresh onions amounted to about 485,000 tons worth \$161 million, fresh tomatoes about 137,000 tons worth \$47 million, dry beans about 57,000 tons worth \$51 million, and sweet potatoes about 38,000 tons worth \$17 million.

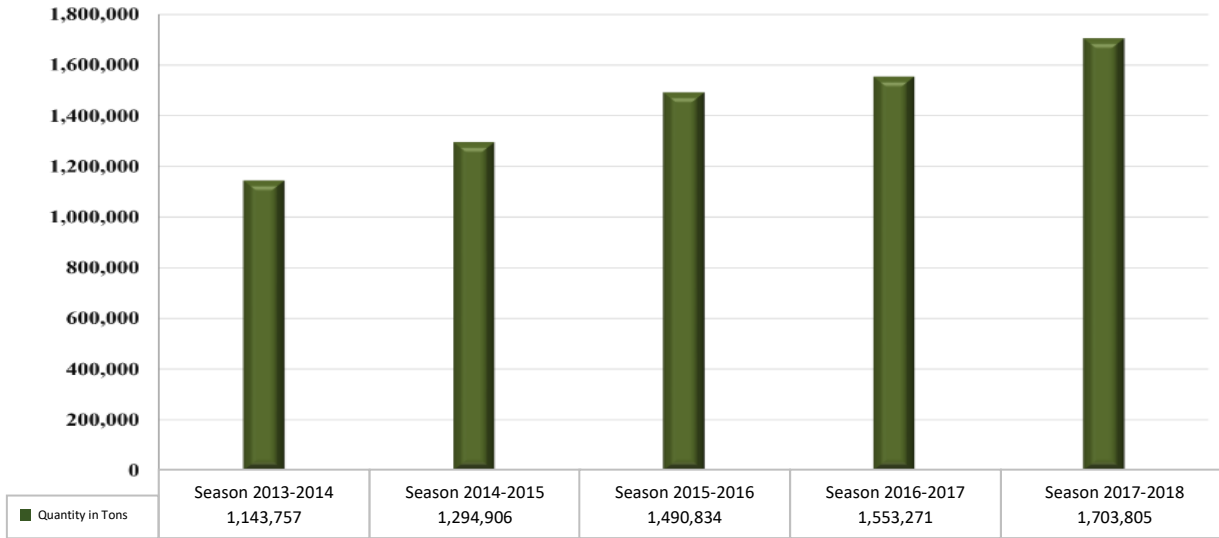
Egypt's exports of peanuts recorded about 38,000 tons worth \$62 million, fresh strawberries about 38,000 tons worth \$85 million, and cut flowers, ornamental plants and palms about 45,000 tons worth \$52 million and about 446,000 tons of other items worth \$359 million.

Over the past five seasons, Egyptian citrus exports have improved significantly, thanks to the quality of Egyptian products and compliance with international standards, and the government represented by the Ministries of Commerce and Agriculture is keen to promote exports because they are a guaranteed source of foreign currency.



From September 2013/14 to August 2017/18, the number of citrus exports increased by 48.96% to 1.703 million tons worth \$741 million in 2018 compared to \$1.143 million in 2013 with a value of \$496 million, an increase of \$245 million.

A Comparative Statement of The Total Amount of Egyptian Citrus Exports The Last Five Seasons



Source/ Foreign Trade Data Warehouse - General Organization for Export and Import Control

The export season starts from September and continues until the end of August the following year

According to the report, citrus exports during the 2014/15 season recorded \$294,000 million worth of \$487 million, rising to \$1,490,000 during the 2015/16 season worth \$587 million. It then rose to 1,553,000 tons during the 2016/17 season worth \$617million.



Conclusion

The issue of food security is of the utmost importance in Egypt at all economic, political and research levels, where it was included in Egypt's strategy 2030. The state is also making continuous efforts to close the food gap of major food commodities in light of limited supply and water and the steady population growth.

It has long-lived on an agricultural area of not more than 8 million acres, the proceeds of its agricultural activity throughout its history, but has come a long way in recent years towards adding more than two million acres to that area, through a million and a half acres, the New Delta Project, the National Greenhouses Project, the Sinai Agriculture Areas and the Dahir Desert for some governorates.

Agricultural production rates have grown significantly in terms of the strategic crop package and the basic needs of citizens. The self-sufficiency ratios of most food commodities have increased, the export rates of vegetables and fruits have increased to about 5 million tons, in addition to the decline in imports of many goods and food products, and the increased attractiveness of investments in addition to the impact on other sectors such as investment in animals and poultry. For the first time in many years, we have achieved 100% efficiency in poultry, eggs and dairy products with a high percentage of red meat adequacy. Its factories are more than 60% and growth continues thanks to the agricultural boom and the country's interest in the sector and related areas.

The new delta project and the launch of its first phase are represented by the Future of Egypt project on hundreds of thousands of acres. The start of the actual production of about 15 basic crops of grains, vegetables, fruits, sugar beet and others. The project thus represents the broadest and most obvious jump into the new country's strategy in agriculture.

Owning food is a real start for Egypt to be in control of its decisions and face the attempts to impose control over Egypt.



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