

**Arab Republic of Egypt  
Institute of National Planning**



**2022**

**Planning and Development Issues Series No: (330)**

**Executive  
Summary**

**Settlement of Agro-industrial Complexes in the Vicinity  
of Production Sites**

**Processing and Preserving Vegetables and Fruits:  
Case Study**

## Table of Contents

No	Topic	Page No
1	Research Team	1
2	Introduction	2
3	Objectives	2
4	Methodology	4
5	Findings	4
6	Recommendations	5
7	Policy Implications	6

## Research Team

No	Research Team	Name	Degree	Specialization
1	Key Co- Researchers	Prof. Dr. Abdel Fattah Mohamed Hussein	Professor Emeritus	Fiscal Policies
2		Prof. Dr. Abdel Qader Mohamed Diab	Professor Emeritus	Agricultural Economics
3		Prof. Dr. Barakat Ahmed Al-Farra	Professor Emeritus	Agricultural Economics
4		Assis. Prof. Ali Zine El Abidine Qassem	Assistant Professor	Agricultural Economics
5		Dr. Badr Ismail Makhoulf	External Researcher	Statistical Analysis

## Introduction

The tendency to adopt the agro-industrial complex system is expected to have positive effects on improving the final product of agricultural commodities. This leads to an increase in the value-added and opportunities to increase exports or reduce imports, or both, with its economic and social return on the parties participating in its activities (directly or indirectly). For this reason, vegetables and fruits are to be processed and preserved as a proposal for the activity of the agro-industrial complexes targeted to be proposed by this research.

### Justifications

- Due to their natural characteristics, where the percentage of moisture is high and their perishability - the percentage of losses; when the vegetables and fruits are in the market; is higher than that of other raw crops, to a large extent. During 2014 till 2018 this percentage reached about 25.0% in the case of vegetables, and 20.0% and 17.4% in the case of both starchy crops and fruits, respectively.
- During 2014-2018 the production of vegetables and fruits represents a large mass, amounting to approximately 30.6 million tons annually. For instance, fruit and palm gardens occupied approximately 20.0% of the cultivated land area, and vegetables occupied 14.2% of the area planted with seasonal crops. These indicators not only indicate the production losses of vegetables and fruits and the associated losses in production resources; but also indicate the number of vegetable and fruit producers expected to benefit from participating in the activities of these complexes. They represent the segments of small producers, the dominant percentage among them, which amounted to 70.3% in the case of fruits, 82.9% in the case of summer and indigo vegetables, and 80.3% in the case of winter vegetables, according to the results of the agricultural census in 2009 and 2010.

## Purpose of the Research Study

The Purpose of the research can be summarized in the following points:

- Studying the production patterns of vegetables and fruits in the different regions according to their different types and production volumes.
- Measuring indicators of the concentration and location of the cultivation of vegetables and fruits with their different main types, and then identifying the proposed regions for the location of the proposed complexes.

- Determining the production capacities of the proposed complex patterns and their activity type (specialized or diversified).
- Determining the services and facilities necessary for the complex to practice its activities, defining its production paths to markets (local/ export/ alternative to imports).
- Studying the regional distribution of establishments engaged in processing and preserving vegetables and fruits, their production capacity, and the extent of their compatibility with the production capacities of vegetables and fruits for these regions.
- Determining the commodity chains of the inputs and outputs of the proposed complexes, including their various rings, in addition to defining the parallel chain of goods and services for each of these rings. In addition to analyzing the problems and obstacles involved in actual dealing within each of these rings, or between them, and the proposed solutions required to confront them. Preparing production relations based on cooperation and vertical integration of agricultural and industrial activities on this chain, and proposing what is associated with the regulations and systems for the organizational and economic relations between the parties dealing with them, including agricultural producers, manufacturers, traders and service providers.
- Suggesting the organizational and administrative framework for the proposed complex, including defining the responsibilities and duties of each of its parties, and the system of their organizational and economic relations.
- Reviewing sectoral plans and policies related to the formation and operation of such complexes to reveal the aspects and factors motivating investment and production in the activities of the proposed complexes while revealing non-motivating factors and aspects and suggesting how to deal with them.
- Studying the environmental impacts of the proposed complexes on their location areas and proposing tools to avoid their negative impacts.

Determining and measuring the economic and social results of the proposed complexes within the framework by estimating the expected production of final and secondary products and services provided for production, transportation, storage, and marketing. Estimating the value-added and its distributions among the groups participating in the complex and the groups benefiting from it. Estimating the direct effects of these results on the standard of living of the participants and beneficiaries of the proposed complex, in addition to the expected effects on Egyptian exports and imports

## Methodology

Data related to the subject of the research were collected from their primary and secondary sources, in addition to benefiting from the results of relevant research as well as international experiences in this regard.

These data were analyzed by statistical and descriptive methods to reach the appropriate indicators in order to achieve the research objectives and to show the relationships between the variables of this research.

## Findings

1. The study reviewed the models related to agro-industrial complexes to choose what fit with the conditions and reality of Egyptian agriculture, where the cluster model was chosen.
2. The study dealt with the production conditions of vegetable and fruit crops in Egyptian agriculture, and showed their importance in terms of:
  - About (28%) of the total agricultural landholders work in the production of vegetables and fruits.
  - Moreover, most of them are small farmers, as they constitute about 80% of the total number of vegetable producers and about 70% of fruit producers. Thus, the agricultural and industrial complexes help solving poverty problems in the Egyptian countryside by ensuring those producers obtain the fair share of the value of their production. The findings of the study indicate that the marketing margins obtain the largest share of this production.
3. The study presented the places where the production of vegetables and fruits are present among the governorates of the country and the places of establishments that work in the field of processing and preserving these products. So it is easier to determine the appropriate places for the location of the proposed agro-industrial complexes, where:
  - A smaller number of fruit and vegetable producing sites have been identified (13 out of 27 sites) that can be selected for the location of agro-industrial complexes.
  - A smaller number of sites were identified in which the existing establishments are concentrated (12 out of 27 in terms of the number of establishments), (5 out of 27 in terms of production capacities).

- The study also showed the lack of consistency between the production capacities of the establishments and the areas planted by vegetables and fruits, as the study showed that in the five largest governorates producing vegetables and fruits, the area of these crops constitutes about 36% of the total survey in each country. The production capacities of the existing establishments constitute is about 71% of the total production capacities in each country.
4. Accordingly, the study identified three complexes that can be approached to locate the proposed agro-industrial complexes:
- The regional grouping of the Western Delta and the Northern Coast includes the three governorates with Nubaria, Alexandria, Beheira, Matrouh, and Nubaria.
  - The regional grouping of Eastern Delta and Sinai includes Ismailia, Sharqia, Suez, North Sinai, and South Sinai.
  - The regional grouping of the South-Central Delta includes Cairo, Qalyubia, Menoufia, and Giza

## **Recommendations of the Research Study**

The main recommendations of the research can be summarized as follows:

1. Locating agricultural and industrial complexes according to places of vegetable and fruit crops.
2. Promoting the thought and objectives of the proposed complexes by inviting the leaders of the cluster members: producers, input suppliers, traders, manufacturers, exporters, research and extension representatives, logistics, and financiers to meet and discuss the current problem. In addition, raising awareness and determine new opportunities, improve dialogue opportunities with official institutions, and join international technical assistance.
3. Forming the union and associations of producers of horticultural crops. Unions and associations are defined by:
  - The Union's task is to establish principles of professionalism, accept everyone who meets the conditions for membership, representation of all categories of farmers, autonomy and decentralization.
  - Institutional organization of the union whose membership is formed from all agricultural producers, and electing representatives among the members who are allowed to speak on behalf of the members. They have their responsibilities about the institutional model of activity, supported by working technical members, and they

have all the decision-making powers about the management of the union. Choosing objectives, action programs, use of funds, development proposals, and policies, and defending their choices in dealing with the government and private sector partners.

4. Membership and activation of functions of the Chamber of Food Industries in the Federation of Egyptian Industries. There are a large number of unregistered small enterprises that intersect with the registered enterprises. It requires the concerned authorities to work on registering and merging them with the enterprises registered in the Federation of Industries membership. This can help establish an integrated and strong industrial grouping within the Commerce Chambers for the agricultural industries, and the food and beverage industry in the Federation of Industries. In addition, there should a Chamber of Food Industries in the Federation to enter into contractual arrangements with the (proposed) Federation of Horticultural Crops Producers, and its members of establishments of processing and preserving vegetables and fruits for mutual benefits.
5. Dealing with the participating parties for the producers and manufacturers of horticultural products shall be based on the contractual system under the principle of participation that guarantees the fairness of distribution.
6. Follow-up and evaluate achievements and results. At the beginning of work on the project, it is necessary to follow up the works, actions, investment, and results (increasing agro-industrial production, impact exports and imports, impact on employment, impact the environment ... etc.). In addition, identify the pros and cons of implementation, and put forward the necessary visions and policies to avoid the cons and take advantage of the pros to advance the work. As the work progresses and reaches an advanced stage, the evaluation process includes ensuring the political and social sustainability of the complex's project in the future. It can be expedited through the media and conferences that present the policies that have been taken and the achievements and benefits achieved for the partners of all categories, and it has consequences for the continuity of the popular and political support for the project in the future.

## **Policy Impacts**

The necessity of adopting a policy whose tools and mechanisms are consistent with the expected objectives of the agro-industrial complexes, by taking into account the following:

- Inclusion of ministerial decisions necessary to enable the formation and establishment of the Federation of Horticultural Crops Producers and its management, and those necessary to support and develop the performance of the Chamber of Food Industries in the Federation of Egyptian Industries. The necessary points should be included to emphasize the importance of listing and registering

unregistered processing and preservation facilities and including them within the Federation of Egyptian Industries in the policy.

- Inclusion of the binding decisions to provide a feasibility study for the targeted establishment of facilities for processing or preservation, and expansions in the production capacity of existing ones. This is to ensure a balance between the services of these facilities and the area and production of horticultural crops in the regional groupings of the proposed complexes. The study includes the construction site, and what may be found in these facilities and their production capacity, or the areas close to them, with an inventory of the areas and production of horticultural crops in the site and the areas close to it in the policy.
- Inclusion of public service programs and projects provided by public institutions (to the community of agricultural producers and industrial establishments) and providing them to the regional gatherings of the agro-industrial complexes, as is the case with other regions. Examples of this are credit loans offered to finance purchases of production requirements, scientific research and technological development services, guidance, training, agricultural soil improvement facilities and services, follow-up and control of the quality of agricultural inputs and services...etc. in the policy.
- Inclusion of programs and projects of completion and development of infrastructure, especially water and electricity utilities, in the work areas of the regional gatherings of the complexes to enable them to work efficiently and carry out the necessary expansions in the policy.