

Ministry of Agriculture and Agrarian Reform

# NAPC

National Agricultural Policy Center

**Proceedings No 19**  
**Of the Agricultural Policy Forum on**

## **The 2005 Issue of The State of Food and Agriculture In Syria (SOFAS)**

**Prepared By**  
**Mrs Nawal Nehme**  
Info-Com Division

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## **Introduction**

A seminar on the 2005 issue of *The State of Food and Agriculture in Syria (SOFAS)* was the third event of the Agricultural Policy Forum initiative for 2005, promoted by the National Agricultural Policy Center with the support of the FAO Project GCP/SYR/006/ITA funded by the Italian Government. Mr Samir Grad, NAPC researcher, officially presented the seminar, and Dr Rania Al Droubi, Professor at the Faculty of Economics of the University of Damascus, commented on the report contents. The seminar was held on 2 October, at the NAPC premises.

SOFAS 2005 is the second edition of the biennial periodical report NAPC publishes to portray the state and evolution of the Syrian agricultural sector. Designed to give an updated review of the economic and social development in Syria, the SOFAS series intends to stimulate the debate on agricultural policies and to facilitate the mobilization of all stakeholders for the success of the policy reform process. In addition, each SOFAS issue presents in a special chapter a topic of particular importance for agricultural development in Syria based on studies and research undertaken by the NAPC.

Mr Grad illustrated the contents of the report giving an overview of issues concerning the state of agriculture such as conditions of production and related policies, contribution of agriculture to the national economy, Syrian agro-food industry, as well as food availability and consumption. The same he illustrated the content of the special chapter that in this issue is devoted to present the results of the NAPC study on the comparative advantages of the commodity chains of selected representative Syrian agricultural commodities: wheat, cotton, olives, tomatoes, oranges, and livestock. The comparative advantages of agricultural commodities are of crucial reference for policy formulation, especially in consideration of the fact that the country is increasingly opening to the world economy, hence facing growing competition from foreign suppliers.

Dr Al Droubi discussed the report commenting on some topics and providing recommendations for the improvement of future issues of SOFAS.

## **Synthesis of Seminar**

Ms Wafica Hosni, NAPC Deputy Director, welcomed the guests and introduced the lecturers addressing their background and experiences.

Mr Grad started his presentation mentioning the objectives of SOFAS report that are to provide every two years, researchers, policy makers and stakeholders with comprehensive information about relevant topics to agricultural development, useful to the debate on and enhancement of agricultural plans and policies, as well as to offer an updated review of agricultural issues. It also aims at presenting in a special section a selected policy issue, which is in this edition a study recently conducted by NAPC, on the comparative advantages of Syrian agriculture commodities.

The 2005 report comprises two parts: the first reviews the state and the performance of the agricultural sector by presenting a comparison between two periods (1998-2000 and 2001-2003), as well as between study time (2003) and base time (2000); the second presents the special chapter on the comparative advantages study.

**Part I** includes six chapters.

**Chapter (1)** revises the climatic conditions and types of geographical zones, illustrating the differences in temperature and rainfall and their impact on agricultural production and reports on the situation pertaining two main pillars of natural resources - land and water - as well as on the development of forestry resources.

Concerning land resources, the report covers land use justifying its changes due to agro-ecological zones, holding size, land depletion and protection, and describing their impact on agricultural production.

The report also revises issues of special importance related to water resources such as distribution, water deficit, evolution and allocation of irrigated areas, and irrigation efficiency.

**Chapter (2)** focuses on the contribution of the agricultural sector to the national economy during the period 1995-2003, including GDP, employment, trade, and investments.

The estimated contribution of agriculture to GDP at constant prices rises from 23.4% to 25.5%, also showing in its trend proportionality between total GDP and agricultural GDP.

As for the contribution to employment, the report points out to the fact that agriculture share is - still- higher than any other sector in spite of the decline during the studied period from 28% to 26.2%. In addition, the agricultural sector, compared to the others, occupies the highest share of female employment.

Since Syria is likely to face great challenges in opening up new job opportunities for its rapidly growing population, it is advisable to pay more attention to the improvement of agricultural marketing, processing, and rural development in order absorb labor force and prevent rural-urban migration.

Agriculture contribution to trade has increased, following the process towards liberalization and in light of the ongoing negotiations of new agreements. Agricultural exports increased by 20% and imports by 2.3%, although their shares over the total decreased due to the rapid growth of non-agricultural trade especially for oil and oil related products.

Concerning the flows of agricultural investments, which are the major determinant of growth and job creation, the report indicates that the gross fixed capital formation improved in general for both public and private investments. However, the current investments devoted to agriculture and irrigation do not comply with the needs.

Noticeably, this chapter also includes an analysis of the relation causality between labor productivity and income.

**Chapter (3)** covers the evolution of agricultural policies and support services, assessing their impacts on the agricultural sector. Agricultural policies are presented under two subtopics:

1. General policies affecting agriculture: the report clarifies the recent trends in general policies affecting agriculture which led to simplifying the exchange rate regime and money convertibility laws; improving monetary and credit policies (unifying the interest rate and establishing private banks); improving financial policies via adjusting the tax exemption system and adopting the harmonized system to simplify the calculation of customs' tariffs; improving marketing and trade policies.

In this part, SOFAS 2005 also illustrates the impacts resulting from trade agreements on the performance of the agricultural sector including the commitments with Arab countries, the preparation of the partnership with the European Union and the start up of the procedure to join the WTO.

2. Policies specific to agriculture, those determining the framework of agricultural planning and development strategy, the report illustrates policies concerning several agricultural issues and their impacts, such as inputs and credit policies, price and marketing policies, agricultural investments promotion policies, in addition to the evolution of agricultural trade policies including measures specific to exports and imports.

As per the agricultural support services, provided to improve the performance of the agricultural sector, the report underlines and assesses the development and impacts of the most important activities comprising:

- The General Commission for Agricultural Research that contributes to the preparation of legislations related to the improvement of agriculture, concerning drought related issues and water management; quality improvement of plant varieties and animal breeds; resources protection, yield improvement and cost reduction.

- Other services relate to agricultural extension training and education; plant protection; veterinary care and vaccinations; as well as to the development of rural infrastructures.

**Chapter (4)** discusses the agricultural production plan, addressing its special importance for agricultural production in Syria, and focusing on plant production and animal production. In fact, the agricultural production plan is used as reference for agricultural licenses and for providing credits, inputs and agricultural services. The report illustrates its components, establishment and the involved parties, clarifying that irrigated crops plan depends on water norms.

Total agricultural production is composed by 64% of plant production and 36% of animal production. The value of agricultural production increased by 12%, from 1998-2000 to 2001-2003 whereas inputs used for agricultural production increased only by 4%, which is an indicator of the increased productivity of the agricultural sector in the period 2001-2003 compared to the period 1998-2000.

This chapter comprises an analysis of the determinants of the increase in plant production value, decomposing it into its determinants and applying the methodology of index analysis. It identifies the total value of crop production increased by 15%, from (1998-2000) to (2001-2003), and of 12% from 2000 to 2003. The study clarifies that changes in crop composition contribute to 16% of the increase in agricultural production value, pointing out the positive impact of public policies concerning land reclamation and horizontal expansion; whereas, yield improvement contribute to 38% of the increase, reflecting the positive impact of public policies relating to agricultural support services and the vertical expansion.

On the other hand, price changes negatively affected agricultural production value contributing to a decrease of 30% in its total, though compensated by the positive effects consequent to area and yield improvements.

In addition, the report sheds some light on the understanding of the positive impact on consumers and food security resulting from the improvement in agricultural production.

The analysis covers the main components of plant production: cereals, legumes, grazing crops, industrial crops, vegetables and fruits. It assesses the changes in their values and referring to the factors affecting these changes for each group and major crops. Additionally, it presents area, yield and production of the most important crops according to governorates.

The major crops and fruit trees included in the study are wheat, barley, lentils, chickpeas, grazing barley, grazing alfalfa, cotton, sugar beet, cumin, sesame, tomato, potato, olive, citrus, apple, and grape.

Coming to livestock and animal production, this chapter depicts their growth addressing in the specific cattle, sheep, goats, poultry and fish, and identifying the services provided in this field.

**Chapter (5)** analyzes the agro-food industry on the base of the data available reporting on its improvements and features in the public, private, and joint venture sectors. As well as, it presents information about processed food exports.

**Chapter (6)** studies food production availability and consumption, focusing on the current situation of food security through analyzing its main three dimensions: availability, stability and access.

It describes the evolution of food availability totally and per capita and the underlying causes, as well as identifies the contribution of food trade in food availability and stability highlighting the recent substantial improvements.

The analysis observes the growth of food consumption and the intake of nutritional components (calories, protein and fat) from vegetable and animal sources. In addition, it makes a comparison with Arab, neighboring and developed countries to identify the food gap, and to show the effect of per capita income on the structure of calories and nutrients intake.

This chapter defines also the acquisition of food and its interrelationship with prices and income considering the evolution of the indices of consumer such as price, per capita GDP and private expenditure, and assessing the impact on rural areas concerning the holding size.

**Part II** of the SOFAS presents the results of the most recent research work on comparative advantages of selected commodity chains of Syrian agriculture, undertaken by the National Agricultural Policy Center with the assistance of the Food and Agriculture Organization of the United Nations. The study raises essential issues relating to the efficiency of resource use and presents policy options for the implementation of the current development strategy and agricultural production plans, particularly the agricultural export promotion and crop diversification.

The study measures the comparative advantages of selected representative agricultural commodities including cotton, wheat, olive oil, tomato, orange and livestock. In addition, it analyzes the impact of the international prices volatility and yields variations on the comparative advantages, as well as demonstrating the current policies implications.

After the comprehensive presentation of the 2005 SOFAS, Mr Grad summarized the general situation of food and agriculture in Syria as the following:

- The agricultural sector is likely to face difficulties in managing natural resources. Therefore, a more deep analysis and more enhancement of agricultural research are required.
- Agriculture plays an important role in the national economy as it considerably contributes to GDP and employment and improves income.
- The Syrian Government gives great attention to economy liberalization and its adjustment to the world economy, but the impacts of such policies still have to be fully examined.
- Agricultural production improvement at both horizontal and vertical level has been realized, and improvements being achieved in prices policies, positively affecting both producers and consumers.
- Agro-food industry progressed, but more attention should be given to integration between this sector and agriculture production taking into consideration the orientation to trade liberalization.
- The per capita consumption of calories, protein and fat is well above the minimum food requirements determined by the Food and Agriculture Organization. However, the per capita consumption of animal protein should be improved in comparison to neighboring and developed countries.
- There was also an improvement in the level of income since 2000.
- Some agricultural products have comparative advantages depending on the various irrigation sources. This requires more investigation to increase the efficiency of the agricultural sector.

Furthermore, Mr Grad briefly pointed out the major problems encountered by SOFAS preparation and finalization, stressing the lack of data of the required quality on inputs and outputs as a major constraint and the need to rely on quantitative methods to support the analysis in the future.

Dr Rania Al Droubi, discussing the SOFAS 2005 in the second session of the Forum, opened her intervention by acknowledging the National Agricultural Policy Center and the group of NACP researchers in charge of producing and issuing this document for their great efforts. She underlined the importance of this report on the state of Syrian agriculture, and appraised the detailed explanation that provides an overview of the current situation and main issues characterizing Syrian agricultural development, presenting a comprehensive analysis of these aspects.

She remarked that, on the base of the information provided by the report, although the agricultural sector plays a foremost role in the economic and social development of Syria, and has priority in the development plans; this priority is not reflected in the sector allocation of investments neither by the public nor by the private operators.

Dr Al Droubi, particularly, evaluated the study on the Comparative Advantages of some agricultural products as an important reference for policy makers, recommending to give attention to social costs related to rural livelihood, rural-urban migration and uncontrolled urbanization, in assessing the comparative advantages of a production system.

Furthermore, she addressed some useful remarks concerning land use, the decline in total export of sheep in 2003, and the reasons behind dividing the analysis periods into two parts (1998-2000 and 2001-2003).

Additionally, Dr Al Droubi proposed some relevant recommendations for improvements of future issues that can contribute to the development of new policies. Among others, she suggested adding information about the non-agricultural sectors contribution to GDP to highlight the differences between these sectors and agriculture; including a chapter on human resources studying labor forces and focusing on the seasonally unemployment; including a special chapter for the applied policies results, as well as focusing on policy changes and their impacts to evaluate their performance; conducting a study survey concerning the per capita calories intakes in Syria, as well as clarifying the ability to access food taking into account the different income groups in the society.

### **Summary of Discussion**

Opening the discussion on the Forum, Ms. Wafica Hosni thanked the two lecturers for the presentation. The main points raised by the audience and commented by the lecturers can be summarized as the following.

#### ***Topic 1: Quality improvement of agricultural products export***

Harmonization with the international standards is the key to improve quality of Syrian products to enable them to access the EU and other promising markets. In order to help in the formulation of new export policies, the NACP' Agro-Food Division staff interviewed Syrian exporters of fruits and vegetables to identify the difficulties regarding quality and technical measures, particularly with regard to trade opportunities with the European market.

At the meantime, the General Commission for Standards and Measures is responsible to assist in applying the Quality Assurance Systems (ISO, HACCP) in Syrian firms in cooperation with international organizations.

#### ***Topic 2: The analysis periods***

Statistically, several methods are used to assess the economic growth giving different approximate results. Averaging is a method that can be used to smooth variations especially for agricultural statistics and it gives a good estimation when the compared periods are close to each other. However, the most widely used method, is trend based, especially when the time series has many observations, in order to take all values into consideration.

### ***Topic 3: Effects of structural indexes***

The structural indexes Laspeyres and Paasche, concerning area, yield and price, were considered in estimation of the total value of crop production for cereals, legumes, grazing crops, industrial crops, vegetables and fruit. In addition, these indexes are used to identify the impact of the changes in area, yield and price on the value of each crop.

### ***Topic 4: Awassi sheep***

The importance of animal production especially for Awassi sheep is still underestimated economically in Syria. According to the lecturer, it is more efficient to focus on Awassi sheep beside to cumin or other high value crops. It is also very crucial to conduct researches aiming at developing new Awassi breeds for fattening to improve meat production.

The lecturer assured that the next issue of SOFAS would focus on the whole sheep commodity chain.

### ***Topic 5: Supply & demand analysis for food***

The estimation of demand is a very important issue that needs to be matched with supply to form policy options. In this regard, the NAPC' Agro-Food Division is conducting a supply and demand study for selected commodities, which will substantially help in improving the policy making process.

### ***Topic 6: Suggested improvements***

Some participants raised suggestions about different subjects of SOFAS. The most important of those proposals addressed the need to study supply and demand for agricultural products; to extend the analysis concerning nutritional and calories intakes; and to include a further study on the comparative advantages of olive oil and cumin that enjoy high prices in the international markets.

The lecturer agreed upon these suggestions and Dr. Al Droubi remarks reassuring the audience that they will be taken into consideration in the next issues of SOFAS.

**Annex (1)**  
**List of Participants**

**Baraka Company**

Genebert, Riad, General Director

**Center of Economic Studies**

Abu Fakher, Shibly, Consultant

**Federation of Syrian Chambers of Agriculture**

Saloum, Najdat, General Director

**Food and Agriculture Organization**

Adam, Mouhamad Abedlkader, Consultant

**General Federation of Peasants**

Saleh, Maher, Public Relations

**General Commission for Agricultural Scientific Research (GCASR)**

Aldouagie, Sadek, Chief of Public Relations

Albahra, Malak, Researcher - Economic Studies

Genadi, Osama, Researcher - Economic & Social Studies

Ismail, Mohamad, Researcher

Manssour, Fayez, Researcher

**Ministry of Agriculture and Agrarian Reform**

• Agricultural Affairs Dept

Alattar, Fatat, Horticulture Division

Alkatep, Marouan, Chief of Crops Division

Kabbani, Ahmad, Crops Division

• Agricultural Economics Dept

Alkhabaz, Mohammad Nazir, Head of Food and Nutrition Division

Sewar, Hassan, Head of Costs Division

• Agricultural Extension Dept

Alshawa, Haitham, Planning Division

Alrifai, Abedelhadi, Chief of Radio and Media Division

• Project of Ali Alali

Alkhouri, Sahar

Eleias, Amal

Mulhim, Riad

- Project of Rainmaking

Dabboura, Amal, Rainfall Issue

Sukar, Lina, Rainfall Issue

**National Agricultural Policy Center (NAPC)**

Al Ashkar, Haitham

Al Hamwi, Bashir

Al Saadi, Usama

Al Shareef, Mahmood

Alzoughbi, Samira

Atieh, Basima

Babbili, Mahmoud

Baghasa, Hajar

Dahash, Yahia

El Hindi, Atieh, Director

Grad, Samir

Hamza, Raid

Hayder, Firas

Husni, Wafica

Ismail, Isam

Karkout, Me'dad

Melli, Nadia

Nehme, Nawal

Saadeddin, Ahmed

Salameh, Arowa

Shehadeh, Widad

Subh, Samira

**Project GCP/SYR/006/ITA**

Alloush, Shahed, Secretary

Al Matar, Asma, Translator, and Liaison Assistant

Ghanem, Rouba, Administrative Assistant

Grillone, Carmela, FAO International Consultant

Fiorillo, Ciro, Chief Technical Adviser

Perri, Pirro-Tomaso, FAO International Consultant

Keilani, Nasouh, Computer Technician

**Regional Center of Agricultural Consultants & Studies**

Al Ahmad, Hassan, Consultant

**Royal Netherlands Embassy**

Kadri, Samar, Technical Assistant

**Syrian Consulting Bureau for Development & Investment**

Razzouk, Carine, Chief Marketing Analyst

## Annex (2)

### Slides of the Presentation

<p><b>The State of Food and Agriculture In Syria (SOFAS) 2005</b></p> <p>By Samir Grad</p>	<p><b>Introduction</b></p> <ul style="list-style-type: none"> <li>■ Periodical biennial report.</li> <li>■ Second edition of SOFAS. <ul style="list-style-type: none"> <li>■ First edition in 2003.</li> <li>■ Covers three years.</li> </ul> </li> </ul>
<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>■ Providing comprehensive information about: <ul style="list-style-type: none"> <li>■ Topics relevant to agricultural development: <ul style="list-style-type: none"> <li>■ Useful for debating and enhancing agricultural plans and policies.</li> <li>■ Useful for offering an updated review of agricultural issues.</li> </ul> </li> </ul> </li> <li>■ Presenting selected policy issues: <ul style="list-style-type: none"> <li>■ Comparative advantages of selected commodities including all stages of the commodity chain.</li> </ul> </li> <li>■ Beneficiaries: <ul style="list-style-type: none"> <li>■ Researchers, policy makers and stakeholders</li> </ul> </li> </ul>	<p><b>Parts of the Report</b></p> <ul style="list-style-type: none"> <li>■ Comprises two parts:</li> <li>■ Part I: <ul style="list-style-type: none"> <li>■ Includes six chapters.</li> <li>■ Reviews the performance and presents the state of the agricultural sector.</li> <li>■ Compares between two periods (1998-2000 and 2001-2003) and between current time (2003) and base time (2000).</li> </ul> </li> <li>■ Part II: <ul style="list-style-type: none"> <li>■ Presents comparative advantages studies of selected commodities including all stages of the commodity chain.</li> </ul> </li> </ul>
<p><b>Chapter 1</b> <b>Climatic Conditions and Natural Resources</b></p> <ul style="list-style-type: none"> <li>■ Climatic conditions: <ul style="list-style-type: none"> <li>■ Type of climate and geographical zones.</li> <li>■ Differences in temperature and rainfall and their impact on agricultural production.</li> </ul> </li> <li>■ Natural resources: <ul style="list-style-type: none"> <li>■ Land resources: <ul style="list-style-type: none"> <li>■ The changes in land use and their causes.</li> <li>■ Agro-ecological zones and holding size, and their impact on agricultural production.</li> <li>■ Land depletion and protection.</li> </ul> </li> <li>■ Water resources: <ul style="list-style-type: none"> <li>■ Water sources, their distribution and water deficit.</li> <li>■ Evolution of irrigated areas, their distribution and irrigation efficiency.</li> </ul> </li> <li>■ Evolution of Forestry and its causes.</li> </ul> </li> </ul>	<p><b>Chapter 2</b> <b>Agriculture in the National Economy</b></p> <ul style="list-style-type: none"> <li>■ Contribution of agriculture to GDP: <ul style="list-style-type: none"> <li>■ Share of agriculture at constant prices increased from 23.4% to 25.5% (1995-2003).</li> <li>■ Total GDP and agricultural GDP are proportional.</li> </ul> </li> <li>■ Contribution to employment: <ul style="list-style-type: none"> <li>■ Its share is still higher than any other sector in spite of the drop during the studied period (from 28% to 26.2%).</li> <li>■ It ranks first for female employment.</li> <li>■ Syria will face a great challenge in offering new jobs because of the rapid population growth.</li> <li>■ More attention should be given to the improvement of agricultural marketing, processing, and rural development in order to prevent rural migration.</li> </ul> </li> </ul>

<p style="text-align: center;"><b>Chapter 2</b> <b>Agriculture in the National Economy</b></p> <ul style="list-style-type: none"> <li>■ Contribution of agriculture to trade: <ul style="list-style-type: none"> <li>■ It has increased because of trade liberalization and negotiations.</li> <li>■ Exports increased by 20% and imports by 2.3%.</li> <li>■ Its share decreased because of the rapid growth of non-agricultural trade especially oil and oil products.</li> </ul> </li> <li>■ Agricultural investments: <ul style="list-style-type: none"> <li>■ Gross fixed capital formation increased.</li> <li>■ Investments devoted to both agriculture and irrigation are insufficient.</li> <li>■ The evolution of agricultural public and private investments is presented.</li> </ul> </li> <li>■ Analyzing the relationship between labor productivity and income.</li> </ul>	<p style="text-align: center;"><b>Chapter 3</b> <b>Evolution of Agricultural Policies and Supporting Services</b></p> <ul style="list-style-type: none"> <li>■ Evolution of General policies affecting agriculture: <ul style="list-style-type: none"> <li>■ Simplifying the exchange rate regime and money convertibility laws.</li> <li>■ Improving monetary and credit policies: unifying the interest rate and establishing private banks.</li> <li>■ Improving financial policies: adjusting the tax exemption system and adopting the harmonized system to simplify the calculation of customs' tariffs.</li> <li>■ Improving the marketing and trade policies.</li> <li>■ Determining the impact of trade agreements on the performance of the agricultural sector: commitments with Arab countries, preparation of the partnership with the European Union and start up of the procedure to join the WTO.</li> </ul> </li> </ul>
<p style="text-align: center;"><b>Chapter 3</b> <b>Evolution of the Policies Specific to Agriculture</b></p> <ul style="list-style-type: none"> <li>■ Determining the framework of agricultural planning and agricultural development strategy and their impact on the agricultural sector.</li> <li>■ Illustrating: <ul style="list-style-type: none"> <li>■ The policies concerning agricultural inputs and credit and their impact.</li> <li>■ The policies concerning marketing and prices and their impact.</li> <li>■ The policies concerning enhancement of agricultural investments.</li> <li>■ The evolution of agricultural trade policies including exports and imports.</li> </ul> </li> </ul>	<p style="text-align: center;"><b>Chapter 3</b> <b>Agricultural Support Services</b></p> <ul style="list-style-type: none"> <li>■ Policies specific to the General Commission for Agricultural Research: <ul style="list-style-type: none"> <li>■ Investment policy.</li> <li>■ Policies concerning improved varieties and breeds and their impact.</li> <li>■ Other policies concerning resources protection, increase of yield and reduction of costs.</li> </ul> </li> <li>■ Policies specific to agricultural extension services and education and their impact.</li> <li>■ Services concerning plant protection, veterinary care and artificial insemination and their impact.</li> <li>■ Services concerning infrastructure and their impact.</li> </ul>
<p style="text-align: center;"><b>Chapter 4</b> <b>Agricultural Production</b></p> <ul style="list-style-type: none"> <li>■ Illustrating the components of the agricultural plan.</li> <li>■ Describing the procedure of establishment of the agricultural plan and the involved parties.</li> <li>■ Establishing the agricultural plan for irrigated agriculture according to water norms.</li> <li>■ Using it as reference for agricultural licenses and for providing credits, agricultural inputs and agricultural services.</li> <li>■ Defining the components of agricultural production: <ul style="list-style-type: none"> <li>■ Plant production (64%), animal production (36%).</li> <li>■ Increased by 12% whereas agricultural inputs by 4%. <ul style="list-style-type: none"> <li>■ Increased agricultural productivity.</li> </ul> </li> <li>■ Comparison between two periods.</li> </ul> </li> </ul>	<p style="text-align: center;"><b>Chapter 4</b> <b>Plant Production</b></p> <ul style="list-style-type: none"> <li>■ Decomposition of the increase in the value of plant production into its determinants.</li> <li>■ The methodology of index analysis.</li> <li>■ An increase of 15% from 1998-2000 to 2001-2003.</li> <li>■ An increase of 12% from 2000 to 2003. <ul style="list-style-type: none"> <li>■ A value increase by 16% due to the change in crop composition. <ul style="list-style-type: none"> <li>■ Shows the positive impact of public policies concerning land reclamation and horizontal expansion.</li> </ul> </li> <li>■ A value increase of 38% due to yield improvement. <ul style="list-style-type: none"> <li>■ Shows the positive impact of public policies concerning agricultural support services and vertical expansion.</li> </ul> </li> <li>■ A value decrease of 30% due to price changes. <ul style="list-style-type: none"> <li>■ Was recovered thanks to area and yield improvement.</li> <li>■ Shows the positive impact on consumers and food security.</li> </ul> </li> </ul> </li> </ul>

<p style="text-align: center;"><b>Chapter 4</b> <b>Plant Production</b></p> <ul style="list-style-type: none"> <li>■ Components: <ul style="list-style-type: none"> <li>■ Cereals, legumes, grazing crops, industrial crops, vegetables and fruits.</li> </ul> </li> <li>■ Assessing the change in the value of each group and its major crops due to area, yield and price impact.</li> <li>■ Identifying the factors affecting the changes in the value, area, yield and production for each group and its major components.</li> <li>■ Decomposing the major crops according to governorates concerning area, yield and production.</li> <li>■ Major crops and fruit trees: <ul style="list-style-type: none"> <li>■ Wheat, barley, lentils, chickpeas, grazing barley, grazing alfalfa, cotton, sugar beet, cumin, sesame, tomato, potato, olive, citrus, apple, and grapes.</li> </ul> </li> </ul>	<p style="text-align: center;"><b>Chapter 4</b> <b>Livestock and Animal Production</b></p> <ul style="list-style-type: none"> <li>■ Depicting the evolution of cattle, sheep, goats, poultry, fish and their products.</li> <li>■ Tracing the factors affecting the changes in livestock.</li> <li>■ Identifying the services provided to the livestock and the underlying changes.</li> </ul>
<p style="text-align: center;"><b>Chapter 5</b> <b>Agro-Food Industry</b></p> <ul style="list-style-type: none"> <li>■ Evolution and underpinnings of the agro-food industry: <ul style="list-style-type: none"> <li>■ Public sector.</li> <li>■ Private sector.</li> <li>■ Joint-Venture sector.</li> </ul> </li> <li>■ Exports of processed food.</li> </ul>	<p style="text-align: center;"><b>Chapter 6</b> <b>Food Availability and Food Security</b></p> <ul style="list-style-type: none"> <li>■ Tracing the main dimensions of food security: <ul style="list-style-type: none"> <li>■ Availability, stability and access.</li> </ul> </li> <li>■ Describing the evolution of food availability and its underlying causes: <ul style="list-style-type: none"> <li>■ Total availability and per capita availability.</li> </ul> </li> <li>■ Contribution of food trade to food availability (stability): <ul style="list-style-type: none"> <li>■ Substantial improvement.</li> </ul> </li> <li>■ Evolution of food consumption: <ul style="list-style-type: none"> <li>■ Calories, protein and fat.</li> <li>■ Vegetable and animal sources.</li> <li>■ Comparison with Arab, neighboring and developed countries to identify food gap.</li> </ul> </li> </ul>
<p style="text-align: center;"><b>Chapter 6</b> <b>Food Availability and Food Security</b></p> <ul style="list-style-type: none"> <li>■ Acquisition of food: <ul style="list-style-type: none"> <li>■ Its interrelationship with prices and income.</li> <li>■ Analysis of the evolution of the indices of consumer price, per capita GDP and per capita private expenditure.</li> <li>■ Impact on rural areas concerning holding size.</li> </ul> </li> </ul>	<p style="text-align: center;"><b>Part II</b> <b>Comparative Advantages of Selected Commodity Chains</b></p> <ul style="list-style-type: none"> <li>■ Discusses issues concerning resource efficiency, policy scenarios and commodity systems.</li> <li>■ Comprises: <ul style="list-style-type: none"> <li>■ The commodities under study: <ul style="list-style-type: none"> <li>■ Cotton, wheat, olive oil, tomato, orange, livestock.</li> </ul> </li> <li>■ The Measurement of comparative advantages.</li> <li>■ The results of the study.</li> <li>■ The impact of the changes in international prices and yield on comparative advantages.</li> <li>■ The impact of policies.</li> </ul> </li> </ul>

<p style="text-align: center;"><b>Problems Encountered</b></p> <ul style="list-style-type: none"> <li>■ Lack of: <ul style="list-style-type: none"> <li>- data of the required quality on inputs and outputs.</li> <li>- quantitative methods to support the analysis.</li> </ul> </li> </ul>	<p style="text-align: center;"><b>Results</b></p> <ul style="list-style-type: none"> <li>■ The agricultural sector will face difficulties in the use of natural resources. Therefore, a more in depth analysis and more enhancement of agricultural research are required.</li> <li>■ Agriculture plays an important role in the national economy as it considerably contributes to GDP and employment and improves income.</li> <li>■ The Syrian Government gives a great attention to the liberalization of the economy and its adjustment to the world economy, but the impact of policies have still to be identified.</li> <li>■ A great jump in agricultural production both horizontally and vertically as well as in price policies has been achieved, affecting both producers and consumers positively.</li> </ul>
<p style="text-align: center;"><b>Results</b></p> <ul style="list-style-type: none"> <li>■ A great progress in agro-food industry has been attained, but more attention should be given to the integration between agriculture and agro-food industry taking into consideration the liberalization of trade.</li> <li>■ The per capita consumption of calories, protein and fat is well above the minimum food requirements determined by FAO. The per capita consumption of animal protein, however, should be improved if compared to neighboring and developed countries.</li> <li>■ There was also an improvement in the level of income since 2000.</li> <li>■ Some agricultural products have comparative advantages depending on the various irrigation sources. This requires, however, more investigation to increase the efficiency of the agricultural sector.</li> </ul>	<p style="text-align: center;"><b>Projected Improvements</b></p> <ul style="list-style-type: none"> <li>■ Improving chapter 1 on natural resources: <ul style="list-style-type: none"> <li>■ Resource efficiency by governorate.</li> </ul> </li> <li>■ Improving chapter 2 on agricultural investments.</li> <li>■ Improving chapter 3: <ul style="list-style-type: none"> <li>■ Focusing on policy changes and impacts.</li> <li>■ Making use of quantitative analysis methods: <ul style="list-style-type: none"> <li>■ Commodity chain analysis (General and specific), index analysis and supply and demand analysis.</li> </ul> </li> </ul> </li> </ul>
<p style="text-align: center;"><b>Projected Improvements</b></p> <ul style="list-style-type: none"> <li>■ Improving chapter 4: <ul style="list-style-type: none"> <li>■ Considering the entire commodity system and value added calculation.</li> <li>■ Using the quantitative analysis methods to assess the impact of policies.</li> <li>■ Conducting the analysis on inputs, outputs and their interaction.</li> </ul> </li> <li>■ Improving chapter 5 on agro-food industry.</li> <li>■ Improving chapter 6: <ul style="list-style-type: none"> <li>■ Deepening the analysis concerning nutritional and calories intake.</li> <li>■ Using the results of supply and demand analysis.</li> </ul> </li> <li>■ Adding new chapters on prices and results.</li> </ul>	<p style="text-align: center; font-size: 2em;"><b>Thanks</b></p>