

AGENCY FOR INTERNATIONAL DEVELOPMENT  
R.P.C./CDIE/DI REPORT PROCESSING FORM

HA-ABF-096

ENTER INFORMATION ONLY IF NOT INCLUDED ON COVER OR TITLE PAGE OF DOCUMENT

1. Project/Subproject Number

936-5447

2. Contract/Grant Number

DHR 5447-Z-00-7074

3. Publication Date

December 1989

4. Document Title/Translated Title

A Rapid Appraisal of the Tunisian Agribusiness Sector: A Preliminary Outline of the Principal Policy Constraints to Tunisian Agribusiness

5. Author(s)

1. Christopher Alden Mock (Deloitte Hasins & Sells)  
2.  
3.

6. Contributing Organization(s)

7. Pagination

8. Report Number

9. Sponsoring A.I.D. Office

S&T/RD

10. Abstract (optional - 250 word limit)

11. Subject Keywords (optional)

1. 4.  
2. 5.  
3. 6.

12. Supplementary Notes

13. Submitting Official

Jerry Martin

14. Telephone Number

(301) 913-0500

15. Today's Date

May 1, 1990

DO NOT write below this line

16. DOCID

17. Document Disposition

DOCRD [] INV [] DUPLICATE []

# **AGRICULTURAL MARKETING IMPROVEMENT STRATEGIES PROJECT**

Under contract to the Agency for International Development, Bureau for Science and Technology, Office of Rural Development  
Project Office 4250 Connecticut Avenue, N.W., Suite 500, Washington, D.C. 20008 • Telephone: (202) 362-2800 • Telex: 312636

PN-ABF-096  
ISN 66049

## **A RAPID APPRAISAL OF THE TUNISIAN AGRIBUSINESS SECTOR: A PRELIMINARY OUTLINE OF THE PRINCIPAL POLICY CONSTRAINTS TO TUNISIAN AGRIBUSINESS**

**DECEMBER 1989**

### **PREPARED BY:**

**CHRISTOPHER ALDEN MOCK**

**OF  
DELOITTE HASKINS & SELLS**

### **IN CONSORTIUM WITH:**

**ABT ASSOCIATES  
THE POST HARVEST INSTITUTE  
FOR PERISHABLES**

**Prime Contractor: Abt Associates Inc., 4250 Connecticut Avenue, N.W., Suite 500, Washington, D.C. 20008 • (202) 362-2800**

**Subcontractor: Postharvest Institute for Perishables, University of Idaho, Moscow, Idaho 83843 • (208) 885-6791**

**Deloitte Haskins & Sells, 1001 Pennsylvania Avenue, N.W., Suite 350, Washington, D.C. 20004 • (202) 879-5600**

## TABLE OF CONTENTS

I.	PURPOSE, SCOPE AND FOCUS OF THIS ASSESSMENT .....	1
	1.1 Purpose .....	1
	1.2 Scope .....	1
	1.3 Focus .....	2
II.	DEFINITION OF AGRIBUSINESS .....	3
III.	MATRIX OF PRINCIPAL POLICY CONSTRAINTS .....	6
IV.	RECOMMENDED AREAS FOR FUTURE RESEARCH AND ANALYSIS ..	9
V.	OUTLINES OF POLICY CONSTRAINTS AND RESEARCH NEEDS BY SUBSECTOR .....	12
	CUT FLOWERS AND ORNAMENTAL PLANTS .....	13
	ALMONDS AND OTHER NUTS .....	14
	COTTON AND TEXTILES .....	15
	SPICES AND ESSENTIAL OILS .....	17
	HIDES AND SKINS/LEATHER PRODUCTS .....	18
	LIVESTOCK AND MEAT PRODUCTS .....	19
	BIBLIOGRAPHY .....	20
Annex 1	SCOPE OF WORK .....	22
Annex 2	SUBSECTOR OUTLINES .....	25
	OLIVE OIL .....	25
	FRUITS AND VEGETABLES .....	27
	PROCESSED TOMATO PRODUCTS AND HARISSA .....	28
	DATES AND DATE PRODUCTS .....	29
	CITRUS .....	30
	WINE .....	31
	OCEAN PRODUCTS .....	33
	ALMONDS AND OTHER NUTS .....	34
	CUT FLOWERS AND ORNAMENTAL PLANTS .....	35
	SPICES AND ESSENTIAL OILS .....	36
	CEREALS .....	37
	LIVESTOCK AND MEAT PRODUCTS .....	39
	POULTRY .....	40
	DAIRY PRODUCTS .....	41
	LEGUMES .....	43
	SUGAR .....	44
	COTTON AND TEXTILES .....	45
	HIDES AND SKINS/LEATHER PRODUCTS .....	46
	CROP CULTIVATION INPUTS .....	47
	ANIMAL FEED .....	49
Annex 3	THE IMPORTANCE OF SMALL-SCALE FIRMS .....	50
Annex 4	ESTIMATED NUMBERS AND TYPES OF AGRIBUSINESS FIRMS ....	51

## LIST OF FIGURES AND TABLES

FIGURE 1:	PRINCIPAL FUNCTIONS IN AN AGRIBUSINESS SYSTEM .....	4
FIGURE 2:	COMMODITY SYSTEM FLOWCHARTS OF THE TUNISIAN CEREALS SYSTEM: THE CONTROLLED & NON-CONTROLLED SUB- SYSTEMS .....	5
TABLE 1:	PRINCIPAL AGRIBUSINESS SUBSECTORS .....	7
TABLE 2:	MATRIX OF PRINCIPAL POLICY CONSTRAINTS BY SUBSECTOR .....	8

# **I. PURPOSE, SCOPE AND FOCUS OF THIS ASSESSMENT**

## **1.1 Purpose**

This assessment constitutes an independent component of the Rapid Appraisal of the Tunisian agribusiness sector which was commissioned by USAID/Tunis. The rapid appraisal was to provide a description of the agribusiness sector, as well as an analysis of constraints and opportunities within the sector, in order to serve as the basis for the development of new activities to support Tunisian agribusiness under the upcoming Agribusiness Promotion Grant (APG). The appraisal report is composed of three separate elements: (1) the American Society of Agricultural Consultants International (ASACI) team report, which includes analyses of the agricultural sector, the investment climate, and constraints and opportunities primarily relating to US investment in Tunisian agribusiness export operations; (2) an analysis of the Tunisian horticultural sector and the potential for expansion of horticultural exports; and (3) this assessment, which provides an outline of the principal policies constraining domestic agribusiness firms (with or without foreign investment from any source) which are producing both for export and for the local market.

## **1.2 Scope**

This assessment was performed over a ten-day period in November 1989. Due to time constraints, the analysis is based mainly on the most recent literature available and documentation available to USAID on the Tunisian agribusiness sector, as well as on selected interviews with specialists in the field and on the consultant's observations. Because of the relatively large body of literature available, it was decided that the analysis should be presented in a synthesized outline form accompanied by a matrix summarizing the principal policy constraints; it was agreed that this was the most effective means of informing the USAID Mission and the future project identification teams about the issues under consideration. This report also includes a delineation of issues for which there was insufficient information available, as well as recommendations concerning areas which should be further researched, either before the development of the new agribusiness project, as part of the new APG activities, or within existing research projects such as the Agricultural Policy Implementation Project (APIP).

Because of the significant policy changes which have been under consideration by the Government of Tunisia (GOT) and the policy modifications which have recently been enacted, an analysis based largely on the literature and documentation presently available may not necessarily present an accurate, up to date depiction of the present policy environment. Further, much of the existing literature is rather cursory and incomplete, and sometimes even inaccurate, in its description of the functioning of the agribusiness sector and constraints to agribusiness operations. Therefore it is recommended that this analysis be considered as the first phase of a several-phase effort to assess and prioritize the most significant present policy constraints to the agribusiness sector. Subsequent phases of this effort should include: (1) a more thorough search for supplementary information and data on several of the most promising subsectors, particularly involving high-value export products; such information could be obtained from private entrepreneurs, professional

groups, and the Ministry of Agriculture; and (2) a comprehensive series of interviews with agribusiness practitioners and experts in all important subsectors, in order to better understand the real impact of current policies, as well as the impact of policy changes which have recently been enacted.

### **1.3 Focus**

The focus of this assessment is on policy constraints which, according to private entrepreneurs and policy analysts, are inhibiting the operations of many private sector agribusiness firms or reducing the efficiency of the Tunisian agribusiness sector. The implicit objectives underlying this analysis are to increase the efficiency of the overall system and to stimulate increased participation in the system in order to generate increased employment, to provide an increased or improved supply of products for the local market (and thereby possibly to reduce imports), or to generate additional foreign exchange through export expansion. However, obviously, factors which constrain certain enterprises may serve to benefit other actors in the system, as is often the case with processing margin regulations (which may protect certain of the already-established, less efficient processors) and consumer price subsidies and controls, which clearly benefit the consumer. Therefore what is defined as a constraint based on the objectives outlined above may not be perceived as a constraint by actors with different objectives. Further, policies defined as constraints to agribusiness firms must be viewed in the context of GOT national economic and political objectives which may place higher priority on other goals, such as the maintenance of predictable, controlled consumer prices vis-a-vis the development of the agribusiness sector.

## II. DEFINITION OF AGRIBUSINESS

Agribusiness encompasses not only the firms which process agricultural products (commonly defined as agroindustries), but also the organizations and individuals which perform the entire sequence of functions from farm input production and delivery through to ultimate product consumption<sup>1</sup>. R. A. Goldberg and J. H. Davis, who created the term 'agribusiness', define this sequence of functions as components of an agribusiness system, or, for a particular commodity, components of a commodity system. The functions performed within these systems include not only activities related to the production and disposition of physical commodities, but also supporting and coordinating functions which affect the operations of various different entities within the systems, such as the provision of financing agricultural research and extension, and government regulation<sup>2</sup>. Figure 1 presents a diagram of the principal functions in an agribusiness system, and Figure 2 includes commodity system flowcharts for the Tunisian cereals sector.

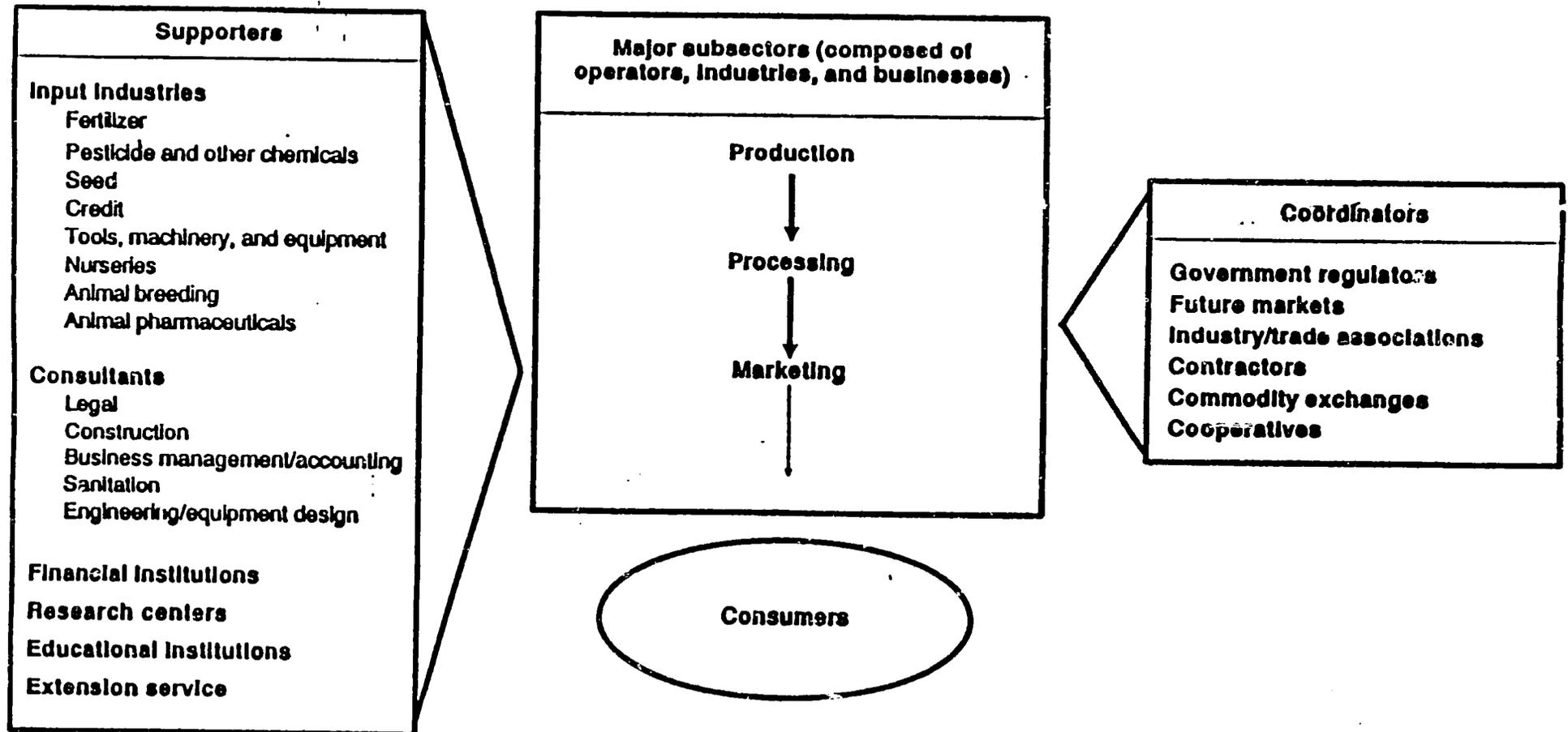
The multiple functions within an agribusiness or commodity system are highly interrelated; each may affect the performance of other functions and ultimately the performance of the entire system. An apparent weakness or failure in one particular component may in fact be caused by weakness or failure in another distinct, yet interdependent component. Therefore, while the principal objective of the upcoming APG may be to support the development of certain functions within the Tunisian agribusiness system, such as agricultural marketing and processing, or the export of fresh and processed agricultural products, it will nevertheless be imperative to understand the operations, interrelationships, and impact of each of the other components or functions which affect these activities. It may also be necessary to consider supporting activities to develop certain of these other components (either within the APG activities or in other projects), such as agricultural credit or agricultural research.

---

<sup>1</sup> James E. Austin, Agroindustrial Project Analysis, Baltimore: The John Hopkins Press, 1976.

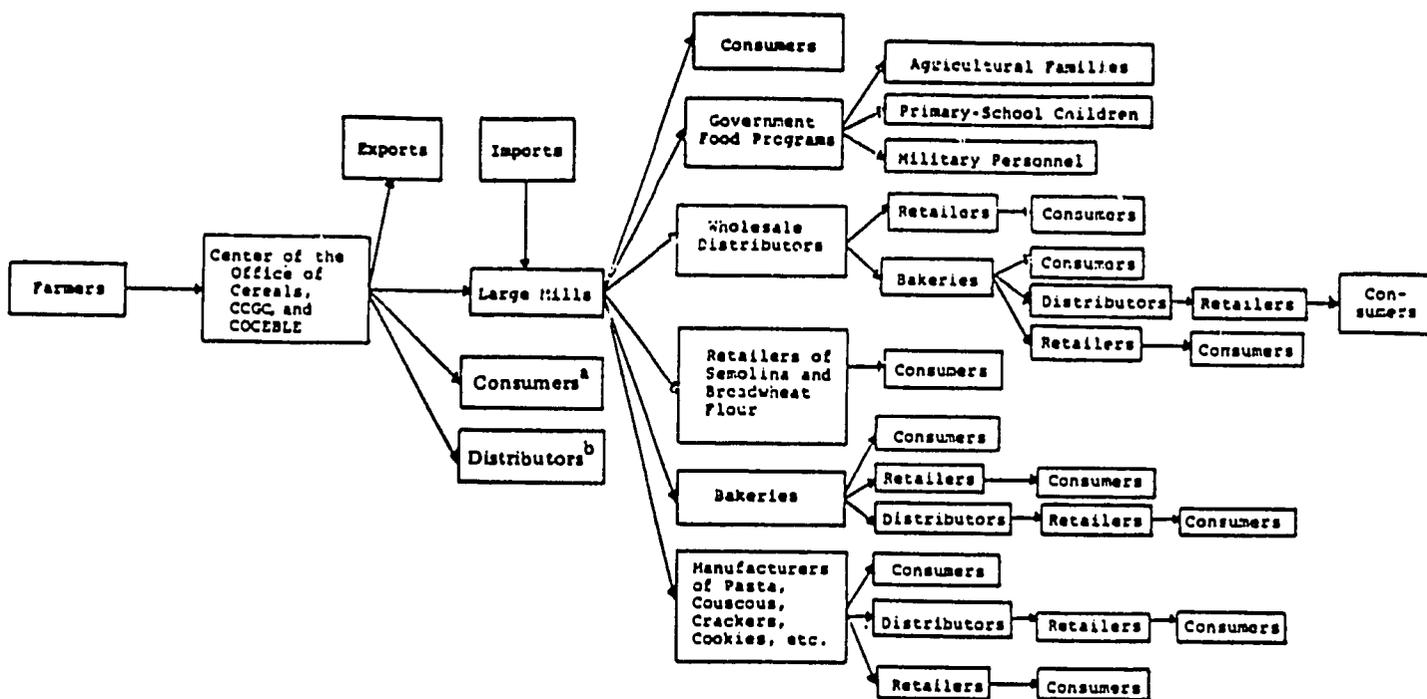
<sup>2</sup> Drawn from R. A. Goldberg and J. H. Davis, A Concept of Agribusiness, Boston: Division of Research, Harvard Business School, 1957.

**FIGURE 1: PRINCIPAL FUNCTIONS IN AN AGRIBUSINESS SYSTEM**



Source: Mock and Mooney, 1987

**FIGURE 2: COMMODITY SYSTEM FLOWCHARTS OF THE TUNISIAN CEREALS SYSTEM: THE CONTROLLED & NON-CONTROLLED SUB-SYSTEMS**

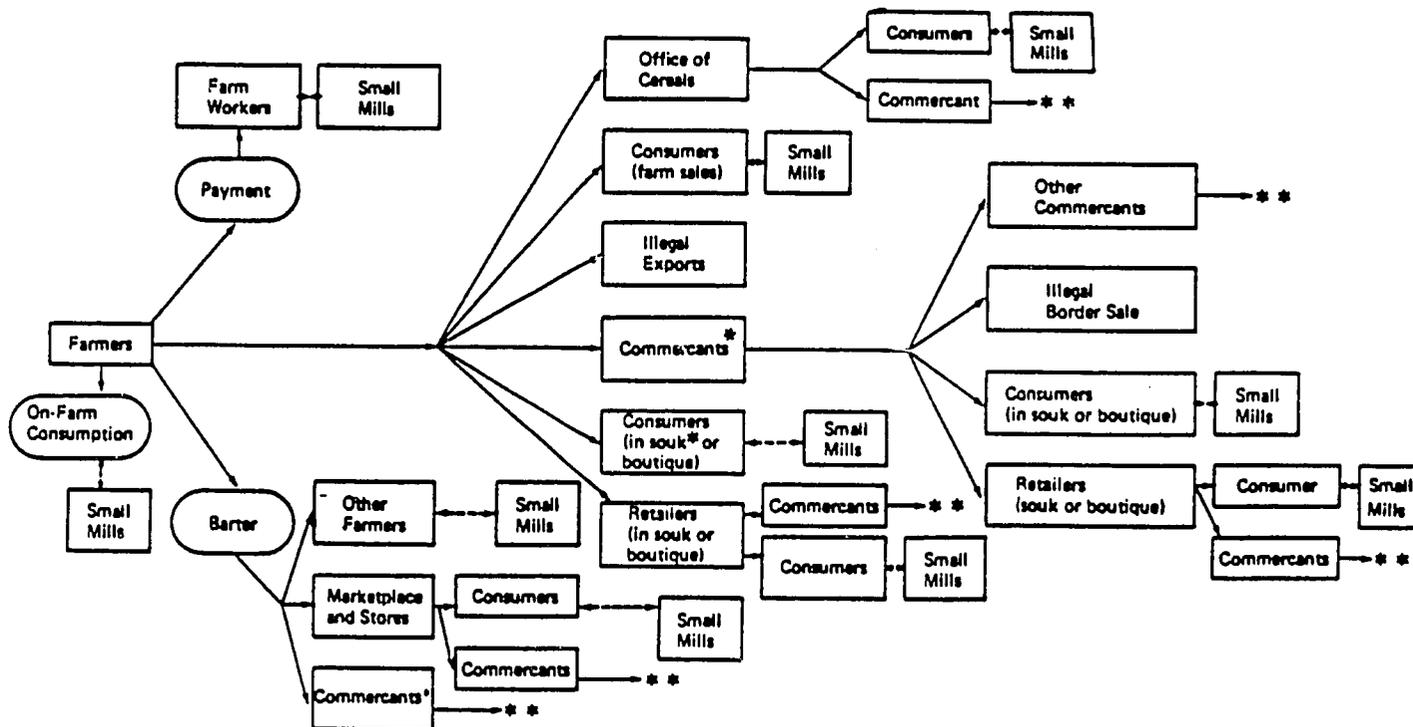


**Figure 2a: The Controlled Distribution and Retail System.**

Note: Solid lines denote sales.

<sup>a</sup>Purchasers of grain from the collection centers have the grain processed at small local mills, which are defined as part of the noncontrolled system.

<sup>b</sup>Grain sold to distributors becomes part of the noncontrolled system; see Figure 8-2 for a diagram of the transactions of these distributors.



**Figure 2b: The Noncontrolled Distribution and Retail System.**

Note: All solid line transactions denote sales, unless otherwise noted. Dotted lines show transfer for milling.

\*Commercants are grain dealers, usually wholesale distributors. Souks are the markets, and boutiques are small retail outlets.

\*\*All commercants trading grain have the same range of options: sale to other commercants, illegal border sales, sales to consumers in souks or houtiques, or sale to retailers (souk or boutique operators).

### **III. MATRIX OF PRINCIPAL POLICY CONSTRAINTS**

As noted in Section I above, the policy constraints outlined in this section were identified largely through a review of the most recent literature and documentation available to USAID, as well as through selected interviews and the consultant's observations. Although there were some relatively recent materials available on constraints encountered by all agribusiness firms in general, the most useful materials and discussions centred on the specific problems of each of the various agribusiness subsectors. (Because of the considerable variation in the degree and types of controls for each subsector, as well as the very particular nature of the constraints within subsectors, it is essential to thoroughly examine each subsector individually; generalities can only be accurate to the extent that they refer to specific constraints verified within particular subsectors.) A list of the subsectors which were selected for analysis is provided in Table 1.

The principal policy constraints which were identified for each subsector are summarized in the matrix which is presented in Table 2. In certain cases, the failure to identify particular constraints as inhibiting factors for individual subsectors does not, in fact, necessarily mean that such constraints may not be important; instead this indicates that these constraints may not have been noted in the literature available to USAID or identified through the limited field interviews or field observations performed for this report.

An outline of key descriptive points on each subsector, as well as brief descriptions of the specific constraints and the bibliographic sources, is included in Section V and Annex 2. For certain subsectors there was little or no recent information or data available. Thus these subsectors have not been included in the matrix (Table 2), although the absence of information concerning these subsectors was noted in the outline notes on each of these subsectors. Seven subsectors were identified as highest priority in terms of the need for further analyses of their corresponding commodity and market systems. Outline notes for these subsectors are contained in Section IV.

**TABLE 1: PRINCIPAL AGRIBUSINESS SUBSECTORS**

- I. Agribusiness, General**
- II. High Value Products, Present or Potential Export**
  - 1. Olive Oil, Table Olives
  - 2. Fruits and Vegetables
  - 3. Processed Tomato Products/Harissa
  - 4. Dates and Date Products
  - 5. Citrus
  - 6. Wine
  - 7. Ocean Products/Fish
  - 8. Almonds and Other Nuts
  - 9. Cut Flowers and Ornamental Plants
  - 10. Spices and Essential Oils
- III. Basic Staples**
  - 11. Cereals
  - 12. Meat Products
  - 13. Poultry
  - 14. Dairy Products
  - 15. Legumes
  - 16. Sugar
  - 17. Vegetable Oils
- IV. Industrial Products**
  - 18. Cotton and Textiles
- V. High Value Agricultural Derivatives**
  - 19. Hides and Skins/Leather Products
- VI. Agricultural Production Inputs**
  - 20. Crop Cultivation Inputs
  - 21. Animal Feed

TABLE 2 MATRIX OF PRINCIPAL POLICY CONSTRAINTS BY SUBSECTOR

Policy Constraints	SUBSECTORS																							
	Olive Oil	Olives, Capers	Fruits/Veg.	Tomato Conc.	Dates	Citrus	Wine	Ocean Prod	Wheat	Legumes	Veg. Oil	Reconst. Milk	Sugar	Beef	Poultry	Cotton	Fertilizer	Herbicides	Cereal Seeds	Irrig. Equip.	Animal Feed	Proces. Equip.	Agribus. (Gen)	
GOT Legal Monopoly:	x				x	x			x	x	x	x	x	x										
Produce Purchasing	x				x				x	x		x												
Processing												x												
Wholesale Marketing	x						x		x	x		x					x							
Retail Marketing																	x							
Exporting	x				x		x																	
Importing									x		x	x	x	x					x			x		
Illegal' Parallel Market	x					x	x		x	x		x		x					x			x		
Investment Approv. Proces			x	x																	x		x	x
Access to Credit:																								
Farm Production:																								
Seasonal	x	x	x			x		x	x	x					x	x	x	x						
Medium-term	x	x	x			x		x							x	x								
Marketing/Proces:																								
Short-term	x		x	x	x																	x		x
Medium-term	x		x	x	x		x																	
Credit Administration	x								x	x						x	x	x		x		x	x	x
Access to Foreign Exch.	x		x	x			x	x												x		x	x	x
Access to Farm Inputs		x	x			x	x	x								x								x
Access to Proc. Equip.							x								x									x
Import: Licensing		x																						
Quotas												x									x		x	x
Duties												x									x		x	x
Administration												x									x		x	x
Price Regulation:																								
Farm Producer Price	x			x	x		x		x	x		x		x		x								
Wholesale Price	x					x		x	x	x				x			x							
Retail Price	x			x		x	x		x	x	x	x	x	x			(x)	(x)	(x)		(x)			x
Margin Regulation:																								
Wholesale Margin	x						x		x	x	x	x		x										
Processing Margin	x		x				x		x		x	x	x	x										
Retail Margin	x	x	x	x	x	x	x		x	x	x	x		x	x	x								x
System of Grades/Std.	x	x	x	x		x	x	x	x			x		x	x									
Quality of Packaging	x	x	x	x		x	x	x	x			x												x
Taxation: Wholesale			x																					
Retail							x							x	x									
Export Administration	x		x			x	x																	
Subsidies: Processing									x			x	x											(x)
Consumer Price	x								x		x	x	x	x			(x)	(x)	(x)		(x)			
Need for Aric. Res.		x	x	x			x								x	x								
Controls on Entry: Proc.							x		x															
Controls on Exit: Farm Lev.	x						x																	x

\* Parentheses indicate GOT plans to remove constraint in 1989-90.

#### **IV. RECOMMENDED AREAS FOR FUTURE RESEARCH AND ANALYSIS**

**1. Commodity System and Market Analyses.** There is little or no up-to-date information on many subsectors which are presently important to the Tunisian economy or which show great potential. High priority should be given to intensifying and expanding the types of commodity system and market analyses currently being performed under APIP. However there are several areas in which the APIP studies could be strengthened; these include: (1) analyses of export potential should be performed not only for the US market, but also for other present and potential markets, such as EC, Eastern Europe, the Gulf, and Africa; (2) emphasis should be given not only to the status, trends, and requirements of present and potential markets, but also to market contacts and marketing procedures for each discrete market; long after the market analyses are out-dated, information on how to access particular markets will remain valuable; (3) the studies should also include analyses of potential for the principal processed derivatives of each commodity--this has been performed in some, but not all, of the APIP studies; (4) there should be additional information on the major competitors in each market, including their production and marketing costs, as well as any policy, geographic, or other advantages; and (5) for products produced mainly for the domestic market, greater attention should be given to any parallel markets operating outside of government controls, the reasons for the existence of these markets (especially including the reasons for farmer participation and consumer preferences concerning these products); while some of the APIP studies have addressed these issues, they have not been sufficiently covered in other studies.

If the APIP project is expanded or extended to include these additional commodity systems studies, the procedures for the dissemination of the materials to the private sector, as well to a broader range of GOT agencies, need to be revised; despite the excellent quality of the APIP studies, efforts to assure that the materials are made available to all relevant GOT institutions, private sector entrepreneurs, and investors are presently inadequate.

Highest priority should be given to commodity system and market analyses on the following subsectors:

- cut flowers and ornamental plants
- horticultural products and processed derivatives (with details on each of the products with highest potential)
- almonds, hazel nuts, pistachios, and other nuts
- cotton and textiles (the Ministry of Agriculture is planning to commission CNEA to perform a study of the cotton subsector; any additional analyses should obviously compliment this study, if it is conducted)
- spices and essential oils
- hides/skins and leather goods
- livestock and meat products

APIP is currently conducting or planning studies on three of the other most important subsectors, which include dates (to be finalized by late 1989), ocean products (anticipated for 1990), and cereals (to be completed in late 1990).

2. **Supplementary analytical support for policy design and implementation.** For several subsectors, APIP has already completed excellent comprehensive studies which clearly delineate priority areas for policy reform. However in order to design and implement concrete new policies, it will most likely be necessary to perform supplementary analyses of particular issues. Consideration should be given to expanding the APIP project to provide for this capability, without reducing APIP's capacity to perform the studies planned for 1990 and to undertake additional commodity system analyses such as those outlined above.

3. **Constraints to small-scale agribusiness firms.** While small-scale operations constitute the vast majority of Tunisian agribusiness firms and account for the majority of the output of the sector, the particular constraints confronted by these firms have not apparently been explicitly examined. Most of the materials on the individual subsectors note the preponderance of small-scale firms within each subsector but do not delineate the differential impact of particular constraints, especially policy constraints, on the smaller-scale firms. (For example, it may be true that in Tunisia, as in many countries, incentives and advantages, such as subsidies, provided to large-scale firms do not apply to the smaller firms; similarly, issues which do not constitute problems for large firms may constrain the performance of smaller businesses.) Because of the severity of Tunisia's unemployment problem, constraints to the operations of small-scale firms are of particular importance. This is due to the more labour intensive technologies generally used by smaller firms, as well as their ability to generate employment at a lower investment cost, despite their ineligibility for advantages and incentives. Small-scale firms will also become increasingly important as Tunisia progresses in its privatization program; many of the present functions of parastatals, such as the Office of Cereals, will most likely be assumed by both small- and medium-scale agribusiness firms. (Annex 3 provides information on the importance of small-scale firms within the Tunisian agribusiness sector).

4. **Constraints to access to credit for farm production, produce marketing, and processing.** APIP anticipates that a study of credit problems and needs within the agricultural sector may be conducted during 1990-91. This would be highly advisable due to the frequently-reported problems concerning such factors as inadequate per hectare allocations of seasonal credits for certain crops, inflexible seasonal credit repayment requirements which do not fit crop production and marketing cycles, inadequate availability of medium-term credit for on-farm investments (especially for irrigation equipment), collateral requirements, and extremely cumbersome credit administration procedures which can act as a disincentive to farmer application for credit. However the problems and needs of agribusiness firms in obtaining both working capital and investment credit should also be thoroughly reviewed; the literature on the individual agribusiness subsectors was replete with comments concerning the difficulties of private sector entrepreneurs, particularly small- and

medium-scale operators, in obtaining working capital and financing for such items as trucks, cold storage, and processing equipment. The possibility of targeting some of the Section 108 funds for medium- and small-scale agribusiness firms should be seriously considered.

5. **The problems of and potential for contract farming operations.** The extent to which contract farming is presently being practised by Tunisian firms is unclear, although there is a limited amount of information available concerning a few schemes and the particular problems which they encountered. However contract farming is an extremely widely-used mechanism not only in developing countries but in developed countries as well. A recent AID-funded study of contract farming in Africa revealed that this mechanism has been particularly successful in the assuring a predictable supply of high-value labour-intensive horticultural crops for export to Europe from such countries as Kenya, Cote d'Ivoire, Senegal, Cameroon, Mali, and Burkina Faso<sup>3</sup>. The study also found that contracting has been successfully used to assure a steady supply of agricultural inputs to factories engaged in the processing of such high-value products as cotton, tobacco, tea, and oil palm. It would be useful to apply the results of this study (which enumerates the typical types of problems encountered by contracting firms and farmers, as well as the crops for which it is best suited) to the Tunisian context and to conduct a similar study of the experience to date with contract farming in Tunisia.

6. **The present efficiency of and appropriate role for state-controlled farms.** Although a rather contentious issue, it would be useful to analyze the present operations and the efficiency of Tunisian state-controlled farms, including the OTD state farms, agro-combinats, fermes pilotes, and UCP's, in order to assess the appropriateness and effectiveness of their present activities and to determine whether some of these lands could be more effectively utilized through other arrangements. These might include retaining some as pilot, demonstration, and research operations; leasing, selling, or granting some of the lands to small farmers (particularly present employees); and leasing or selling some of the lands to private firms, particularly those which might engage in core-satellite contracting operations with local small farmers.

---

<sup>3</sup> Watts, M., C. Mock, M. Billings, S. Jaffee, P. Little, Contract Farming in Africa, Institute for Development Anthropology, 1987.

## **V. OUTLINES OF POLICY CONSTRAINTS AND RESEARCH NEEDS BY SUBSECTOR**

An outline of policy constraints and research needs was prepared for twenty agribusiness subsectors. The commodity system and market analysis identified six sub-sectors for which highest priority should be given for further study. These include:

- cut flowers and ornamental plants
- almonds, hazel nuts, pistachios, and other nuts
- cotton and textiles (the Ministry of Agriculture is planning to commission CNEA to perform a study of the cotton subsector; any additional analyses should obviously compliment this study, if it is conducted)
- spices and essential oils
- hides/skins and leather goods
- livestock and meat products

A separate study of horticultural products and processed derivatives was commissioned as part of the rapid appraisal by USAID, while examination of at least three other sub-sectors: dates, ocean products and cereals is being planned.

The bibliographic sources for the following materials are noted in parentheses (for example, Ministère de l'Agriculture:a, 1987); the first number refers to the number of the document as recorded in the bibliography, while the second number refers to the year of publication of the document. Items for which there are no sources noted were identified through interviews or from field observations.

## **CUT FLOWERS AND ORNAMENTAL PLANTS**

**Research Needs:** The ASACI team highlighted the potential for cut flower and ornamental plant exports from Tunisia to Europe; however while they interviewed at least one flower exporter, the team did not provide any information on the flowers and ornamentals subsector or constraints within the subsector. No other information was available on these issues, except for brief synopses of two existing flower exporting schemes.

The export of flowers and ornamentals to Europe has become an extremely important activity for several sub-Saharan African countries. Tunisia has several distinct advantages over the already-successful African exporters, including its much closer proximity to Europe, the geographical dispersion of its numerous airport facilities, the much greater frequency of air flights to Europe, the availability of cold storage facilities, and its more efficient domestic transport, airport, and freight handling facilities. Thus it would be extremely useful to include an analysis of this subsector and potential export markets as part of the APIP agenda or under any research/analysis component of the APG.

## **ALMONDS AND OTHER NUTS**

**Research Needs:** The principal nuts which are produced at the present time include almonds, hazel nuts, and pistachios. There was no information on this subsector in the available literature/documentation available to USAID. A more thorough effort should be made to assemble any existing information; however it appears that an APIP study on this subsector would be useful.

## COTTON AND TEXTILES

**Description:** In recent years the economic importance of the textile subsector increased dramatically; it now employs over 80,000 people and earns about 550 million dollars in foreign exchange annually, making it the second most important foreign exchange earner after oil. Cotton represents about half of the fibre inputs utilized by the Tunisian textile industry; about 90% of this cotton is imported, due to the presently limited level of local production.

Tunisian production of cotton has declined since the early 1960's (when the area in cotton reached 650 ha) due to the lack of locally adapted varieties and low productivity, the unsuitable nature of the predominant varieties for the local textile industry, price fluctuations in the world cotton market, and the dissolution in 1970 of the agency charged with promoting the cotton and textile subsectors (Commissariat General du Textile et de l'Habillement). However because of the agronomic suitability of cotton to Tunisian agricultural conditions (particularly its ability to tolerate saline water), the significant increases in the import price of cotton in recent years, and the expanding cotton requirements of the Tunisian textile industry, since the early 1980's cotton has received increased GOT attention; in 1981 the Societe le Coton Tunisien was created to support and promote the development of the cotton subsector. By 1989 the area in cotton reached almost 400 ha, over a ten-fold increase from the area in production in the early 1980's.

The potential economic importance of the cotton subsector is based not only on the expected reduction of cotton fibre imports, but also on the potential production of products based on cotton by-products (animal feed, vegetable oil, and chemical and pharmaceutical products) and the import substitution effect of the development of these industries.

### Policy Constraints:

1. Difficulty in obtaining seasonal and investment credit for cotton cultivation and the lack of incentives vis-a-vis those provided for other crops.
  2. Low farm producer prices as compared with increasing production costs, particularly due to the high irrigation water and labour requirements of cotton production.
  3. The lack of research activities and results on adapted and improved varieties, cultural techniques, plant protection, mechanization, and irrigation utilization.
  4. Exclusion of cotton from OTD and other GOT pilot and demonstration farming activities, as well as from internationally-supported agricultural projects.
  5. Limited agricultural extension capability.
- (All materials from Ministry of Agriculture, DP., 1989)

**Research Needs:** Because of the limited attention given to this subsector, the increasing importance of textile exports and the significance of the employment generated by the textile subsector, and the increasing volume and cost of cotton imports, it would be extremely useful to have a comprehensive analysis performed of the cotton, textiles, and cotton by-products subsectors. The Ministry of Agriculture may commission CNEA to perform an industry study; however the scope of the possible study is unclear, and it is not certain that the study will be conducted.

## SPICES AND ESSENTIAL OILS

**Research Needs:** There is almost no information available to USAID on existing production and marketing of spices and essential oils, although one source noted that in 1987 there were 13 firms engaged in the processing of spices and essential oils (Ministère de l'Agriculture:a, 1987). (The scale of these firms was not specified; apparently there are also numerous very small family firms engaged in the production of these products for the local market.) Further, information on present export activities, if any, and future export potential is not available. The comprehensive agro-industrial assessment performed by the Ministry of Agriculture (DPSAE) in 1987 stated that while an analysis of this subsector had not been included in their scope of work, the analysts believed that these products did show significant potential for both the local and export markets (Ministère de l'Agriculture:a, 1987). The analysis noted that Tunisia produces an array of fruit, vegetable, and aromatic extracts for use in medicines and perfumes, as well as a variety of spices; the principal products which they believed to show potential included anis vert, carwi, coriander, rose geranium, jasmine, curcumin, laurier, and red pepper. APIP should consider performing an analysis of this subsector; such an analysis should include the present production and processing of garlic, as well as the export market potential for various garlic products (this is an excellent high value export product which several Sahelian countries have been quite successful at exporting).

## **HIDES AND SKINS/LEATHER PRODUCTS**

**Research Needs:** In recent years the production and export of high quality high value leather goods have become an increasingly important component of the Tunisian economy. No information was available to USAID on this subsector; however limited field observations and interviews suggest that it is an area of considerable potential due to the excellent design and craftsmanship of Tunisian finished leather goods (particularly clothing), as well as to their relatively low prices. A preliminary investigation of any existing sources of information should be conducted, and, depending on the quality and depth of this information, consideration should be given to supporting a comprehensive analysis of the status of the industry, constraints to its performance, and the potential for its development.

## LIVESTOCK AND MEAT PRODUCTS

**Description:** Since 1979 sheep and goat marketing have been partly liberalized, although margin and price controls remain for butchering and retail sales. GOT retains comprehensive legal controls on the beef subsector, although 65% of the beef produced is handled by a non-controlled 'parallel' market; 50% of the lamb produced also operates outside of GOT controls. (Ministère de l'Agriculture:a, 1987)

### **Policy Constraints:**

(1) GOT holds a legal monopoly on the importation of beef. GOT imports beef from the EEC at subsidized prices and sells at higher prices to local butchers; the profits are used to cross-subsidize local purchases of beef, mainly from government-owned cooperatives (UCP's). (Ministry of Agriculture, 1987)

(2) For beef, GOT establishes fixed producer prices, wholesale prices, butchers' margins, and retail prices. (Sources are unclear as to whether all these controls remain for lamb). The farm price is below that which producers can receive in the parallel market, resulting in a diversion of most privately-produced beef to the non-controlled system. Retail prices in the open market are also higher than government-set prices; however the sources are unclear as to why consumers support the parallel market by choosing to purchase at the higher prices. The government-controlled retail prices provide a subsidy to consumers on locally-produced beef, but effectively imposes a tax on consumers of imported EEC-subsidized beef. (Ministry of Agriculture, 1987)

(3) GOT grading standards for wholesale and retail pricing of meat are extremely rudimentary and do not provide differentiation according to the quality and cuts of meat; this removes any incentive for high quality meat production. (Ministère de l'Agriculture:a, 1987, Ministry of Agriculture, 1987)

(4) Lack of sufficient quality control in and hygienic regulation of slaughterhouses in the controlled system and total absence of control and regulation of non-controlled system. (Ministère de l'Agriculture:a, 1987)

(5) High customs duties on meat processing equipment. (Larbi, 1989).

**Research Needs:** The available information was out-dated, incomplete, and sometimes contradictory. Further, one source admitted that not enough was known even by GOT about the livestock and meat subsectors to enable the design of effective policy interventions. (Ministry of Agriculture, 1987) Thus there is a clear need to collect any other more complete and recent information and, based on its quality, to consider performing a comprehensive study of these subsectors.

## BIBLIOGRAPHY

- Abbott, John and Bechir Rassas. Development of Agricultural Exports in Tunisia. Draft Report. June, 1987.
- Agence de Promotion de l'Industrie. L'Industrie Manufacturiere en Tunisia. Juillet, 1989.
- Anon. Rapport de Synthese au Niveau du Secteur Agro-Alimentaire. No date or author.
- Anon. Strategie de Rationalisation des Dépense de la Caisse Générale de Compensation. Aout, 1989.
- APIP. Semi-Annual Report and Update of Year II Work Plan. Tunis. July, 1989.
- Eveleth, G.S., R. Fernandes, S. Lewis. The Private Sector Strategy for USAID/Tunisia. Bureau for Private Enterprise, AID. July, 1988.
- Ministry of Agriculture. DPSAE with Associates for International Resources and Development. Tunisia. Agricultural Profitability, Protection and Comparative Advantage. June, 1987.
- Heureux, Ch. J., G. Rondia, M.S. Bachtá. Possibilités d'Amelornatio de la Commercialisation des Engais Chimiques et de Leur Utilisation dans les Exploitations. APIP/DGPDIA. Fevrier, 1989.
- Ithaca International Ltd.:a Dairy Processing Case Study. APIP. Final Draft Report. July, 1989.
- Ithaca International Ltd.:b Export Commodity Study Olive Oil. January 1989.
- Ithaca International Ltd.:c Export Commodity Study Citrus. APIP Project. January, 1989.
- Ithaca International Ltd.:d Export Commodity Study Wines. APIP Project. January, 1989.
- Johnson, Scott. Irrigation and Water Management Study, Tunisia. July, 1988.
- Larbi, Sheila. Bibliography on Tunisian Agroindustry. USAID/Tunis. 1989
- Ministère de la Production Agricole et de L'Agro Alimentaire. L'Industrie Agro-Alimentaire. Projets Nouveaux et Perspectives. October, 1987.
- Ministère de l'Agriculture:a Direction de la Planfication, des Statistiques, et des Analyses Economiques. Etude de Commercialisation et de Transformation des Produits Agricoles - Situation Actuelle. January, 1987.
- Ministère de l'Agriculture:b Direction de la Production Animale Sous-Direction de la Zoothechnie. L'Agriculture en Tunisie. 1987.
- Ministère de l'Agriculture:c Direction Generale de l'Agro-Alimentaire. Plan Directeur des Conservees et Semi-Conservees des Fruits et Légumes et Transformation des Produits de la Mer. Octobre, 1988.
- Ministère de l'Agriculture:d, DP. Note Sur La Culture du Cotonnier en Tunisie. Tunis, Novembre, 1989.

- Ministry of Agriculture, DPSAE with AIRD. Tunisia Agricultural Profitability Protection and Comparative Advantage. June, 1987.
- Mock, Christopher. Tunisia - Case Study (The Tunisian Cereals System) in Global Malnutrition and Cereal Fortification, James Austin, Editor. Ballinger Publishing Company, Cambridge, Mass. 1979.
- Mock, Christopher and Mooney, Tim. Haiti Agribusiness and Small Rural Enterprise Assessment. Arthur D. Little for USAID, Port au Prince, 1987.
- Moez, Doraid Yusuf. On Reforming Tunisia's Food Subsidy Program. IBRD. Summer, 1989.
- Newman, Mark, J. Ladd, M. Poughzala, B. Ben Amar. A Plan of Action for Tunisia's Cereal Sector: First Phase Report. Abt Associates, DH+S. APIP/AMIS Project. May, 1989.
- Note Relative à la Compensation des Prix dans le Secteur Sucrier. August, 1989.
- Office de Pêche:a Stratégie de Développement du Secteur de la Pêche. 1987.
- Office de Pêche:b Note sur le Role des Entreprises Publiques dans le Secteur de la Pêche. 1986.
- Omezzine, Abdullah. Agricultural Industries. 1988.
- TDP. Mission Report. US Agricultural Trade and Development Mission to Algeria and Tunisia. March 31, 1989.
- The American Society of Agricultural Consultants International. A Rapid Appraisal of the Tunisia Agribusiness Sector. For USAID/Tunis. November 7, 1989.
- USAID/TUNIS:a. Tunisia Agricultural Sector Strategy Statement. July, 1989.
- USAID/TUNIS:b. Briefing Note: USAID/TUNIS Privatization and Financial Markets Program.  
Briefing Note: USAID/TUNIS Section 108 Program.  
Briefing Note: Trade and Investment.

**Annex 1**  
**SCOPE OF WORK**

**Agribusiness Policy Specialist Rapid Agribusiness Appraisal, USAID/TUNIS**

Terms of reference have not changed since original TOR sent to DH+S. The following is an elaboration of the TOR.

The consultant will be responsible for an inventory of existing literature/documentation on Tunisian agribusiness marketing policy and the principal policy constraints to agribusiness marketing operations. The consultant will also identify important issues which are not presently or have not been recently covered in the literature. Based on this assessment, she will identify agribusiness marketing policy issues which need further research/investigation in order to serve as the basis for recommendations on policy changes needed to stimulate the development of the Tunisian agribusiness sector.

The literature/documentation will include those materials currently available to USAID/Tunis, including the materials recently collected by the ASACI Agribusiness team. The consultant will address the principal commodities, as analyzed in this literature, and will give particular attention to the issues outlined in Annex A (attached), to the extent that these issues are assessed in the literature.

The consultant will produce a bibliography of materials reviewed and a matrix outlining the principal policy constraints by commodity subsector. She will also produce an outline of the priority areas requiring further research/investigation.

The consultant is contracted for a period of 18 working days. The first seven work-days have been allocated to assisting the ASACI team in their final interviews and report preparation, participation in ASACI debriefings for USAID and GOT officials, background document review, the identification of important agribusiness issues not fully covered by the ASACI team, and the formulation of a suggested scope of work for the remaining time period. The agribusiness marketing policy literature review/inventory/matrix will be prepared during the remaining 11 work days.

The consultant will submit a handwritten rough draft of the matrix/outline on November 17 and will receive oral comments by November 20. A typed draft will subsequently be submitted to USAID by Deloitte Haskins & Sells. USAID will review draft, submit comments to DH&S. This will be finalized in English and French and submitted to USAID.

The consultant is responsible to Shirley Pryor, Agricultural Economist.

The final version of the Terms of References presented above were distilled from the original Terms of References outlined below.

1. Delay in response is due to the need to coordinate with the agribusiness team with which Christopher Mock will be working. The following terms of reference are the result of discussions with the agribusiness team leader. With the enclosed TOR Christopher will be able to deepen our understanding of marketing policy constraints but not duplicate the work of any other team member.
2. **Scope of Work**

USAID has considered the marketing policy area as a possible component of the agribusiness program but at this point does not have a clear enough picture of the need nor of the possible areas of intervention. The consultant will do the following:

A. Identify the major marketing policies constraining agribusiness operations and investment as reflected in the literature/documentation available to USAID. Primary focus to be on constraints to domestic investment, rather than foreign investment. A preliminary list is below. The consultant will modify the list as appropriate.

B. Identify policy related constraints, as described in the available literature, as related to the policies listed below and particularly as they pertain to Tunisians major agricultural exports and potential agricultural exports in particular olive oil, fruits and vegetables, fish and sea products, livestock, and dairy products.

- Corporate licensing requirements and other regulations governing who is permitted to operate in markets;
- Restrictions on transportation of agriculture and food products;
- Regulations of prices and margins;
- Grades and standards encouraging product quality;
- Laws governing salaries and employment;
- Exchange rates;
- Tax and tariff treatment of imports and exports, which affect input, competing products and outputs;
- Tax treatment of profits;
- Rules governing ownership and repatriation of capital investment and earnings;
- Liability statutes; and
- Arbitration procedures.

3. **The consultant is responsible to Shirley Pryor, Agricultural Economist but the consultant will work very closely with the agribusiness team. She will be responsible for an independent report. All material should be made available to the team.**
4. **The consultant must supply all transportation and report preparation materials. No logistics support can be provided by USAID.**

**Annex 2**  
**SUBSECTOR OUTLINES**

**Subsector 1:**

**OLIVE OIL**

**Description:** Olive oil is Tunisia's principal agricultural export; it accounts for 40% of agricultural exports and 8% of total exports. The 1987 value of olive oil exports was TD 70 million. The olive oil subsector also generates 20% of all employment in the agricultural sector. Only 1% of Tunisia's olive orchards are engaged in the production of table olives. (Ithaca International Ltd.:b, 1989)

Various sources estimate that there are from 1085 to 1500 oil processing presses, with about half in the central region, 35% in the south, and 15% in the north. About 62% of national pressing capacity utilizes the classical press technology, which is considered to be obsolete and inefficient; the processing cost per ton of olives is TD 29.368 per ton with this technology, versus 21.811 with the super press technology (32% of national capacity) and 12.932 with continuous chain (6% of capacity).

Tunisian olive oil is exported mainly in bulk, to be packaged and frequently reexported under the brand names of the importers (mainly Italy).

**Policy Constraints:**

- (1) GOT holds a legal monopoly on the domestic wholesale marketing of olive oil, as well as on the collection, storage, and export. The monopoly is administered by the Office National des Huiles (ONH), which defines the amount which farmers can retain for home consumption, grants licenses for domestic retail sales, and sets producer prices, processing margins, wholesale prices, and retail margins. ONH also has a monopoly on the importation of other vegetable oils and their controls their blending with domestic olive oils. Finally, ONH administers controls on private olive oil refining, bottling, and canning firms. (Ministry of Agriculture, 1987; Ithaca International Ltd.:b, 1989; Moez, 1989 and Omezzine, 1988)
- (2) Producer prices are based not on the quantity of olives delivered to the presses, but on the quantity and acid content of pressed oil extracted, which is affected by the pressing technology, equipment extraction rates, and the firms' olive handling systems. Thus producers are effectively taxed because of any inefficiency or obsolete equipment of the presses.
- (3) Producer prices are set nationally according to only 3 categories of product; this eliminates the incentive for quality differentials within categories.
- (4) The oil pricing structure skews production to virgin oils, whereas Tunisia has no assured EEC market for these oils and effective demand in new markets is for pure oils; there is a need for a restructuring of the producer price system to bring prices for different qualities in alignment with export demand.
- (5) Processing margins are set according to the volume of olives pressed, rather than on the percent of oil extracted. Fees are also based on the average costs of the less efficient obsolete classical presses. The setting of processing fees, as well as the basis on which they are calculated, act as a disincentive to investment in equipment, rewards inefficient press operators, and results in higher than necessary processing costs.
- (6) Although premiums are paid to processors for the higher grades of oil, the premiums are insufficient to compensate for the extra costs incurred; this encourages the production of lower quality oil, which is exported in bulk to Italy for reprocessing.
- (7) Because of protection of the local canning industry, GOT policy constrains the import of high quality, finished cans. The low quality of locally-produced cans significantly reduces Tunisia's ability to sell its own packaged, branded product on the international market; this, combined with the high cost of local cans, obliges ONH to export mainly in bulk.
- (8) The Tunisian grading system of different qualities of oils does not conform to the International Olive Oil Council Standard, which is used in the international market.

(9) Several sources mention problems of availability of and access to medium-term credit for plantation investments and processing firms, as well as need for modification of credit repayment terms for seasonal farm production credits (Larbi, 1989, Ministry of Agriculture, 1987).

(10) GOT policy restricts producer freedom to shift from olive production to other competing high value crops, such as apricots, peaches, almonds, and pistachios; permits, which are complex and time-consuming to obtain, are required in order to remove olive trees on certain types of land.

(11) ONH controls the domestic blending of imported vegetable oils with domestic olive oil, sets processing fees and distribution margins, and establishes the subsidized retail prices for blended oils. APIP recommends that vegetable oils should be offered separately from the more expensive olive oils, leaving the consumer free to decide whether to blend the oils. This would result in a lower consumer price for unblended oil or would reduce the subsidy cost to GOT, as well as make more olive oil available for export. (Unless otherwise noted, materials from Ithica:b., 1989)

**Research Needs:** The APIP study is quite comprehensive, although further research is necessary on present and potential markets other than the US market. The study outlines numerous policy reform recommendations, principally concerning the liberalization of prices and controls, and the reduction of the role and activities of ONH; further analytical support would be useful in designing the specific actions involved in the implementation of these reforms.

## Subsector 2:

## FRUITS AND VEGETABLES

**Description:** Little current information on either fresh or processed fruits and vegetables was available (except for the materials on citrus and processed tomato products, which are outlined in separate sections of this report). However Abdallah Omezzine is preparing an analysis of the fresh produce subsector as a component of this Rapid Appraisal; Omezzine's report should be consulted for descriptive materials, as well as for current policy constraints.

### Policy Constraints:

1. Although there is open market pricing of fresh produce at the wholesale level, margins at the retail level are fixed by GOT (15-25% of the wholesale price, with the higher margins for the more expensive items); the fixed margins, as well as the lack of clear grading classifications, serve as a disincentive to the production of higher quality produce.
2. Farmers who handle their own sales and wholesale distributors complain of high municipal and state taxes and various required fees levied at wholesale markets; this reportedly results in the diversion of much produce from these markets, and thus a reduction of the volume of produce available for export. (Ministère de l'Agriculture:a, 1987)
3. GOT price setting of cold storage fees acts as a disincentive to storage of fresh produce (these price controls are reportedly to be removed in the near future). (Ministère de l'Agriculture:a, 1987)
4. Need for marketing credit, particularly to cover cold storage costs.
5. Regulations on the handling of produce in municipal markets, such as the requirement that any produce not sold within 48 hours be sold at cost (apparently to discourage the building up of stocks--i.e. 'control' over the volume and prices on the market), act as a disincentive to the use of these markets, to the production and distribution of high quality high value produce, and to the preservation and storage of produce. (Ministère de l'Agriculture:a, 1987)
6. Need for clear grading standards for local market produce and stricter application of grading and packing standards for export produce;
7. Need to assess whether OTD should retain control of the substantial areas of irrigated land suitable for vegetable production which are presently under its domain; need to consider lease arrangements of some of these lands with export-oriented firms capable of specialized management of intensively produced high value export crops. (Abbott, John and Bechir Rassis, 1987 and Eveleth, Fernandes and Lewis, 1988)
8. Need for intensified and diversified varietal research to assure that exporters can meet the precise product preferences of the European and other export markets, as well as to enable Tunisian producers to diversify their production and extend the present growing seasons for various crops (particularly to take fuller advantage of EEC export 'windows' for winter produce).

**Research Needs:** Comprehensive analyses should be done for various horticultural crops with export potential; emphasis should be placed not only on existing constraints, but also on Tunisian production and distribution costs vis-a-vis other winter produce exporting countries, advantages or disadvantages faced by Tunisia vis-a-vis these countries, the precise product requirements of different import markets, the optimal timing of production and export, and packing and grading requirements and preferences of the different import markets. (Note: IBRD financed a major two-year study of this type on the Moroccan horticultural subsector; the focus of the study was on problems of and potential for exporting to the EC. It is strongly recommended that USAID consider financing or contributing to a similar study for Tunisia.)

### **Subsector 3: PROCESSED TOMATO PRODUCTS AND HARISSA**

**Description:** Forty factories are producing tomato concentrate and other processed tomato products; the exact number of factories producing harissa is unclear from the available literature.

#### **Policy Constraints:**

1. Floor prices are set each year for tomatoes delivered to factories; in effect this acts as a fixed price for the produce, with no differentiation according to quality. (Ministère de l'Agriculture:a, 1987)
2. Consumer prices for processed tomato prices are set by GOT on the basis of production costs and wholesale/retail distribution costs.
3. Need for intensified/diversified varietal research to meet the precise varietal requirements of processing firms and the intended markets.
4. Lack of investment and operating capital credit for processing firms (only 55% of firms have obtained investment credit, and 2/3 of these report that the amount of credit was insufficient; similarly while 2/3 of firms have obtained operating capital credit, 60% of these report that the amount was inadequate). (Ministère de l'Agriculture:a, 1987).
5. Lack of access to high quality containers due to protection of the local canning industry.

**Research Needs:** Little current information was available on these subsectors. Because of the importance of tomato concentrate and harissa within the Tunisian economy, as well as the possible export potential for these products, it would be extremely useful to perform comprehensive analyses of these subsectors, including a thorough study of the export market potential for these products.

#### **Subsector 4:**

#### **DATES AND DATE PRODUCTS**

**Description:** The two types of dates which are produced include high quality deglet nour, which in 1987 represented 82% of exported dates, and dattes communes. At that time, 75% of the total production of both types was marketed domestically (Ministry of Agriculture, 1987). There are 25 date conditioning (disinfecting) and packing firms, of which 14 have cold storage facilities. (Ministère de l'Agriculture:a, 1987, Ministry of Agriculture, 1987). The main export periods include the Christmas season and Ramadan. Export orders must be filled several months before these periods; since the harvest period is in early winter, most export orders are filled with stocks from the prior year's harvest. These stocks must be maintained in cold storage during the 6-9 months before the peak export season (Abbott and Rassas, 1987).

#### **Policy Constraints:**

1. GOT maintains a tight monopoly control on the domestic and export marketing of deglet nour and does not tolerate a parallel market in these dates. Producers are obliged to sell deglet nour to the quasi-governmental organization, Groupement Interprofessionnel des Dates (GID), or to approved private exporters; after the selection of export quality produce, the residual rejects are allowed to be sold privately on the local market.

2. Producer price setting: theoretically producer prices for deglet nour are 'negotiated' between producers, packagers, exporters, and GID; however in effect the prices are set by GOT (Ministry of Agriculture, 1987)

3. Fixed retail margins: as for all domestically-sold produce, retail margins are fixed and widely enforced (Ministère de l'Agriculture:a, 1987).

4. Problems of access to credit: reported problems in obtaining working capital for export operations and lack of flexibility of credit terms (need for extended repayment periods for working capital credit to cover the 6-9 months of cold storage before peak export periods) (Abbott and Rassas, 1987).

**Research Needs:** No recent information was available for deglet nour operations; the only information dated from 1987. Reportedly little, if any, information has ever been collected on the datte commune subsector (Ministry of Agriculture, 1987), although this product constitutes an important 'staple' in the Tunisian diet and a source of income for innumerable farmers and marketing agents. APIP expects to finalize a major study of the date subsector and date export marketing potential in late 1989; thus no additional analysis appears necessary at the present time.

## **Subsector 5:**

## **CITRUS**

**Description:** The domestic and international marketing of citrus has been almost completely liberalized. (Ministry of Agriculture, 1987) Ninety percent of production is derived from small privately-owned groves, rather than from large commercial or state-owned farms. (Ithaca International Ltd.:c, 1989)

### **Policy Constraints:**

1. Local retail margin controls (20%) have stimulated the development of a parallel market and act as a disincentive to the provision of high quality produce; this also has affected the availability of high quality fruit for export.

2. Local retail price controls (ceiling prices) also act as a disincentive to the provision of high quality fruit for the local market, although this does encourage the diversion of produce to the export market. (Ministère de l'Agriculture:a, 1987)

3. The lack of strict application of grades and standards has resulted in the uneven quality of export produce, which often includes malformed, bruised, and scraped produce. (Ithaca International Ltd.:c, 1989)

4. Poor packaging and labelling of export produce, due partly to the restricted availability of high quality and appropriate materials on the local market; lack of quality control on packaging and labels; and high losses due to poor packaging. (Ithaca International Ltd.:c, 1989)

5. Uncertain access to necessary quantities of irrigation water; water from GOT projects is not accessible in appropriate quantities during the periods when it is needed (only large quantities are available during short periods of time; smaller quantities over a longer period of time are needed). (Ithaca:c., 1989, Ministry of Agriculture, 1987)

**Research Needs:** Since APIP has recently concluded a comprehensive study of this subsector, further research in the near future is of lower priority than research on other subsectors.

**Subsector 6:****WINE**

**Description:** Only 35% of Tunisia's wine processing capacity is privately owned; the remaining 65% is either directly owned by the government (13%) or owned by government-controlled cooperatives (52%). (Omezzine, 1988) The percentage of vineyards managed by the public and private sectors and actual wine production in 1985-86 by each is summarized in the following table.

**Table 3**  
**PUBLIC AND PRIVATE SECTOR VINEYARD ACREAGE AND WINE PRODUCTION**

	<b>% of National Area in Vineyards, 1987</b>	<b>% of National Wine Production, 1985-86</b>
<b>Organizations</b>		
Office des Terres Domaniales	23	29
UCCVT (State-controlled cooperatives)	25	59
Other Public Organizations	6	0
Private Sector	46	12

(Source: (Ithaca International Ltd.:b, 1989)

A concise summary of the status of the wine subsector from APIP's excellent, comprehensive recent study: 'Wine production in Tunisia is increasingly a public enterprise. Private producers currently do not have sufficient incentives to even maintain, much less expand or modernize their operations, due to low producer prices and GOT's differential use of domestic tax receipts (on wine) to support public agencies'. (Ithaca International Ltd.:d, 1989)

Reportedly much of the existing processing capacity in the state-controlled sector is obsolete (presumably 'inherited' from former colons). (Ithaca International Ltd.:d, 1989)

Two extremely important segments of the local market include the tourist trade and the expatriate community, which has expanded as Tunisia has assumed increasing importance as an international centre for business, finance, and development.

**Policy Constraints:**

1. Domestic retail taxation, which in 1987 averaged 240% of the domestic wholesale price of wine, depresses local production and sales, constrains investment in improved vineyard plantings and processing equipment, encourages fiscal fraud and unfair competition through tax avoidance, and penalizes grape growers and wine producers by lowering net income. (Abbott and Rassas, 1987), (Ithaca International Ltd.:b, 1989) These factors have resulted in shortages of wine on the domestic market (the frequency and duration of such shortages are unclear, but during this consultant's visit to Tunisia, Tunisian wine was virtually impossible to find in Tunis stores). Further, since the taxes levied are ad valorem unit taxes, they penalize higher quality/higher value wines and act as a disincentive to their production. The APIP study reported that the net price impact of these taxes in 1989 was to increase final domestic retail prices by 323-326%.
2. GOT monopoly of exporting and local distribution constrains export diversification, as well as incentives to produce for the local market.
3. GOT sets prices on wine grapes, wholesale bulk wine, and local retail and export wine sales; also sets margins on processing and distribution.
4. Fixed prices paid to grape producers are based on the alcohol content per hectolitre of wine pressed; this encourages producers to leave grapes on the vines beyond the optimal maturity point, thereby reducing overall quality. Need to revise pricing system to provide higher prices for producers of superior quality wine.
5. Production costs are rising faster than producer prices, resulting in decreasing returns to producers. Further, since higher prices can be obtained for table grapes and

raisin grapes, this results in a diversion of a portion of the grape crop from the wine subsector.

6. Restricted access to foreign exchange for the importation of wine bottling equipment constrains production for export (lack of access to foreign exchange is considered a major reason for Tunisia's inability to even approach the EEC quota for Tunisian wine imports). (Abbott and Rassas, 1987)

7. Prohibitions on the importation of high quality bottles, labels, corks and packaging materials in order to protect domestic industries for these products; low quality of local materials (particularly labels and corks) constrains bottled wine exports.

8. Inadequate quality control of exports; need for stricter supervision and inspection of the bottling process and of final export products to assure conformance with required standards.

9. Need for revised regional vineyard and wine classification and quality designation system.

10. Need for improved and modified sitings of wine grape plantings on state-controlled farms; many deep valley soils are presently in wine grapes, whereas these lands could be better used for other crops; the shallow, hillside, marginal soils which are inappropriate for many crops are actually better wine lands than the valley areas. Also need to use appropriate micro-climates in state farms for superior wine production.

11. GOT regulation on the removal of wine grape plantings; many producers would reportedly cease wine grape production, if allowed, due to present GOT policies within the subsector.

12. Office National du Vin (ONV) restrictions against irrigated wine vineyards, except in drought years, reduces grape quality and restricts yields, thereby decreasing producer income and incentives; thus encourages shift to table grapes. The APiP analysis concludes that with irrigation the present wine crop if could be produced on 1/3 the current area, thus releasing 2/3 of the wine lands to other crops.

13. Need to restructure state-controlled segment of the wine industry, close down unprofitable wineries, consolidate production capacity, and modernize the remaining facilities.

14. Need to stop using wine tax revenues to subsidize losses in state-controlled wine agencies; use revenues to develop the sector, promote exports, and provide higher producer prices.

(Unless otherwise noted, all materials are from (Ithaca International Ltd.:b, 1989).

**Research Needs:** The recent APiP study is extremely thorough, with necessary policy reforms clearly specified. No research needed; however further analytical support might be useful in implementing the recommended reforms.

**Subsector 7:****OCEAN PRODUCTS**

**Description:** Principal canned products include sardines, anchovy, tuna, and mackerel. Principal frozen products include shrimp, poulpes, and seiches. Until recently (early 1989) this subsector was highly controlled and was dominated by the GOT Office National de la Peche (ONP), which was involved in virtually every aspect of the commodity system--input provision, production, processing, local marketing, and exporting. However, in mid-1989 ONP was dissolved and the subsector was substantially liberalized; further liberalization is planned in the near future.

**Policy Constraints:** Due to the very recent liberalization of the subsector, documentation is outdated; thus an outline of remaining policy constraints is not possible. However one remaining constraint is the restrictions on the importation of high quality cans with desired specifications, due to protection of the local canning industry. The lower quality locally-produced cans, which are subject to oxidation, restrict export potential for canned ocean products (Ministère de l'Agriculture:a, 1987).

**Research Needs:** APIP is planning to perform a commodity system/export market study of this subsector in the near future; therefore no further research is needed.

**Subsector 8:****ALMONDS AND OTHER NUTS**

**Research Needs:** The principal nuts which are produced at the present time include almonds, hazel nuts, and pistachios. There was no information on this subsector in the available literature/documentation. A more thorough effort should be made to assemble any existing information; however it appears that an APIP study on this subsector would be useful.

**Subsector 9:****CUT FLOWERS AND ORNAMENTAL PLANTS**

**Research Needs:** The ASACI team highlighted the potential for cut flower and ornamental plant exports from Tunisia to Europe; however while they interviewed at least one flower exporter, the team did not provide any information on the flowers and ornamentals subsector or constraints within the subsector. No other information was available on these issues, except for brief synopses of two existing flower exporting schemes.

The export of flowers and ornamentals to Europe has become an extremely important activity for several sub-Saharan African countries. Tunisia has several distinct advantages over the already-successful African exporters, including its much closer proximity to Europe, the geographical dispersion of its numerous airport facilities, the much greater frequency of air flights to Europe, the availability of cold storage facilities, and its more efficient domestic transport, airport, and freight handling facilities. Thus it would be extremely useful to include an analysis of this subsector and potential export markets as part of the APIP agenda or under any research/analysis component of the APG.

**Subsector 10:****SPICES AND ESSENTIAL OILS**

**Research Needs:** There is almost no information on existing production and marketing of spices and essential oils, although one source noted that in 1987 there were 13 firms engaged in the processing of spices and essential oils. (Ministère de l'Agriculture:a, 1987) (The scale of these firms was not specified; apparently there are also numerous very small family firms engaged in the production of these products for the local market.) Further, information on present export activities, if any, and future export potential is not available. The comprehensive agro-industrial assessment performed by the Ministry of Agriculture (DPSAE) in 1987 stated that while an analysis of this subsector had not been included in their scope of work, the analysts believed that these products do show significant potential for both the local and export markets (Ministère de l'Agriculture:a, 1987). The analysis noted that Tunisia produces an array of fruit, vegetable, and aromatic extracts for use in medicines and perfumes, as well as a variety of spices; the principal products which they believed to show potential included anis vert, carwi, coriander, rose geranium, jasmine, curcumin, laurier, and red pepper. APIP should consider performing an analysis of this subsector; such an analysis should include the present production and processing of garlic, as well as the export market potential for various garlic products (this is an excellent high value export product which several Sahelian countries have been quite successful at exporting).

## Subsector 11:

## CEREALS

**Description:** The GOT Office des Cereales (OC) holds a legal monopoly on the import, domestic collection, and wholesale and retail marketing of wheat, and is responsible for regulating the processing of wheat and the retail marketing of processed wheat products. Prices and/or margins are fixed throughout the wheat system, including the farm level (uniform national prices), importation (fixed margins to OC), domestic collection and distribution (fixed margins to OC), processing (fixed sale price of grain to mills and fixed margins for industrial milling and baking), wholesale marketing (fixed sale price of processed products from mills), and retail sales (fixed sales prices to consumers). Further, the operations of OC, the industrial mills, and bakeries are subsidized, as are retail prices to consumers. The 1989 cost of these subsidies is projected at TD 243.7 million, 85% of the total amount expended by GOT on food subsidies.

Despite its legal monopoly, GOT tolerates, within certain limits, the activities of a parallel market which, with on-farm use of wheat, handles approximately 60-75% of the cereals produced (the percentage varies according to the size of the yearly crop). The parallel market has developed for the following principal reasons: the often higher prices offered to farmers; the willingness of buyers to reward quality differentials; farmers' belief that weighing systems and grading judgements are fairer than in the controlled system; the often more distant locations of the OC collection centres and the lack of compensation for transport costs; complex and time-consuming administrative procedures at OC centres; consumers' preference for selecting the quality of grain before processing and controlling the degree of processing (for couscous).

GOT has tolerated the parallel market in cereals for several possible reasons: the inability of OC to physically handle, particularly to store, the entire national wheat crop, as well as imports; unwillingness to exert the strict controls and impose the punishments which would be necessary to eliminate the parallel market, the high cost of such control, and unwillingness to risk the probable political reaction to such actions; and inability to pay the subsidy costs for the distribution and processing of the entire crop, as well as consumer subsidies for all wheat products consumed.

### Policy Constraints:

1. The system of grain pricing to farmers--fixed prices which are uniform throughout the year throughout the country--acts as a disincentive to farm level storage, results in bottlenecks at OC collection centres after harvest, and increases the need for publically-financed storage facilities. The system also fails to compensate farmers for differentials in transport costs. These factors stimulate the diversion of grain to the parallel system.
2. The OC grain grading system is subjective, provides insufficient differentials for quality, and OC personnel lack the equipment necessary for objective, reliable weighing and grading.
3. The fixed margins to OC for the collection, storage, and handling of domestic grain and the importation of grain act as a subsidy for any OC inefficiency in these functions
4. The fixed margins to the mills also subsidize their inefficiency, act as a disincentive to investment in plant and equipment, and provide no incentive to produce high quality products, leading to frequent complaints concerning the low quality of industrially-processed products.
5. The illegal status of the parallel system, as well as the controls on the system (mainly restrictions on the quantities handled and the geographical areas covered), limits the efficiency of these operations, acts as a disincentive to investment, and prevents effective monitoring of and tax collection from the parallel system.

6. The costly untargeted wheat subsidy system, which theoretically aims to assist low-income people meet their food needs, benefits largely the urban population, both affluent and poor; favours the north vis-a-vis the centre and south, despite the relatively disadvantaged status of these latter regions; and provides virtually no benefit to the large numbers of rural poor. The extremely low subsidized prices also encourage significant consumer waste.

This information was taken from Mock (79) and Newman (89).

**Research Needs:** Since APIP is currently conducting a comprehensive study of the cereals system and reforms to improve its efficiency, no further research appears necessary at the present time.

**Subsector 12:****LIVESTOCK AND MEAT PRODUCTS**

**Description:** Since 1979 sheep and goat marketing have been partly liberalized, although margin and price controls remain for butchering and retail sales. GOT retains comprehensive legal controls on the beef subsector, although 65% of the beef produced is handled by a non-controlled 'parallel' market; 50% of the lamb produced also operates outside of GOT controls. (Ministère de l'Agriculture, 1987)

**Policy Constraints:**

(1) GOT holds a legal monopoly on the importation of beef. GOT imports beef from the EEC at subsidized prices and sells at higher prices to local butchers; the profits are used to cross-subsidize local purchases of beef, mainly from government-owned cooperatives (UCP's). (Ministry of Agriculture, 1987)

(2) For beef, GOT establishes fixed producer prices, wholesale prices, butchers' margins, and retail prices. (Sources are unclear as to whether all these controls remain for lamb). The farm price is below that which producers can receive in the parallel market, resulting in a diversion of most privately-produced beef to the non-controlled system. Retail prices in the open market are also higher than government-set prices; however the sources are unclear as to why consumers support the parallel market by choosing to purchase at the higher prices. The government-controlled retail prices provide a subsidy to consumers on locally-produced beef, but effectively imposes a tax on consumers of imported EEC-subsidized beef. (Ministry of Agriculture, 1987)

(3) GOT grading standards for wholesale and retail pricing of meat are extremely rudimentary and do not provide differentiation according to the quality and cuts of meat; this removes any incentive for high quality meat production. ((Ministère de l'Agriculture, 1987, Ministry of Agriculture, 1987)

(4) Lack of sufficient quality control in and hygienic regulation of slaughterhouses in the controlled system and total absence of control and regulation of non-controlled system. (Ministère de l'Agriculture, 1987)

(5) High customs duties on meat processing equipment. (Larbi, 1989).

**Research Needs:** The available information was out-dated, incomplete, and sometimes contradictory. Further, one source admitted that not enough was known even by GOT about the livestock and meat subsectors to enable the design of effective policy interventions. (Ministry of Agriculture, 1987) Thus there is a clear need to collect any other more complete and recent information and, based on its quality, to consider performing a comprehensive study of these subsectors.

### **Subsector 13:**

### **POULTRY**

**Description:** Poultry accounts for 40% of total Tunisian meat consumption. (Ministère de l'Agriculture:b, 1987) The three largest producers of live animals are the Office des Terres Domaniales, Societe Elevage de Tabarka (SOCELTA), and the Societe Tunisienne d'Aviculture; the first two organizations are state-run, while the third is private. However the industry is dominated by small producers, who constitute 84% of all producers and account for 51% of poultry products. In the mid-1980's, poultry prices were largely liberalized, although poultry feed has remained subsidized through 1989 (subsidies are to be eliminated in late 1989); this resulted in a situation which was very advantageous to poultry producers and drew many new entrants into the subsector. (Ministère de l'Agriculture:a, 1987) This in turn caused a highly competitive environment which resulted in a drop in retail prices for poultry products.

#### **Policy Constraints:**

1. Difficulties of access to credit for small producers; however this is partly due to financial instability within the subsector and the high percentage of borrower defaults. (Ministère de l'Agriculture:b, 1987)
2. Wholesale marketing taxes (set at 10% of product prices) are considered a problem; this results in only 5% of poultry production being channelled through wholesale markets. (Ministère de l'Agriculture:a, 1987)
3. Retail margins are still controlled on eggs (8%) and poultry meat (100 ml/kg). (Ministère de l'Agriculture:a, 1987)
4. Available feed inputs and therefore feed composition are largely determined by Office des Cereales; this results in a lack of producer control over the content of animal feeds and frequently a lack of information about conversion rates of feeds with unfamiliar composition (see subsector 20).
5. Need for more intense national effort on poultry disease research and control, and need for unified national prophylactic policy and programs.

**Research Needs:** The available information on this subsector dates from 1987 and thus may be largely outdated. Any more recent information should be collected and reviewed in order to define current research needs; however this subsector would provide an interesting case study on the 'positive' and 'negative' impacts of partial liberalization vis-a-vis full liberalization within a subsector.

#### **Subsector 14:**

#### **DAIRY PRODUCTS**

**Description:** Reconstituted fluid milk, which is produced from imported powdered milk, is defined by GOT as an essential food item; thus the import of powdered milk is controlled by GOT. The production of reconstituted milk is performed only by subsidized parastatals, its distribution is regulated, and the retail price to consumers is highly subsidized. (In 1988 the world price of reconstituted milk was almost twice the level of the Tunisian retail price.)

In recent years the cost of the reconstituted milk subsidy program has escalated tremendously, due partly to significant increases in the world market price for powdered milk. (This was due partly to new EEC producer quotas for subsidized powdered milk and the subsequent drawing down of EEC stocks in 1987.) The 1985 subsidy cost to Tunisia was TD 8.5 million, whereas the 1989 cost is estimated at TD 30 million.

The GOT aim is to encourage greater national self-sufficiency in the production of milk and dairy products. The present objective is to increase domestic production from 59% of national consumption in 1988 to 75% by 1991.

GOT sets the producer prices for local fresh raw milk. However only 20% of locally-produced milk is sold at these prices to the controlled system; 80% is distributed through the informal parallel market, where farmers receive higher prices and the collection system is better adapted to farmers' needs than the controlled system.

The production and wholesale marketing of reconstituted milk is the legal monopoly of 2 parastatals, STIL and Tunisie Lait, which together operate 4 factories. The two parastatals and 32 private firms also produce various products based mainly on locally-produced raw milk, including yogurt, ice cream, and cheese. Because of the competition from subsidized reconstituted milk, none of the private firms produced processed fresh milk for sale in 1988.

#### **Policy Constraints:**

1. The subsidized sale price of reconstituted milk acts as a disincentive to the production of processed fresh milk.
2. However there is an apparent consumer preference for fresh whole milk, which leads to the high volume of sales through the parallel market; much of this milk is apparently untreated raw milk, which is often unsafe to consume.
3. Although only the 2 parastatals are allowed to produce reconstituted and blended milk for sale, the private firms often use reconstituted powdered milk as a component with fresh milk in yogurt, cheese, and ice cream. However import licenses must be obtained for the import of powdered milk, and the 2 parastatals receive preferential access to these licenses. Because of the difficulties in obtaining licenses, as well as shortages in the supply of local fresh milk, the private firms often operate at less than capacity levels. Further, GOT regulation of the yogurt industry prohibits manufacturers from using more than 5% reconstituted milk as an input.
5. Reconstituted milk processing subsidies to the parastatals support their apparently inefficient operations--processing costs are 3-4 times equivalent US costs, despite lower labour costs in Tunisia.
6. GOT controls on processing margins for yogurt and cheese (except for soft cheeses) were removed in late 1988. However retail margins foremost dairy products are still set by GOT.
7. There is a need for revision of controls, duties, and subsidies on the import of milk packaging materials; the present structure encourages parastatals to use packaging which is three times the cost of alternative materials (tetrabrik/tetrahedron packages instead of plastic bottles).
8. Although GOT operates 71 milk collection centres, 42% of farmers deliver 80% of the fresh milk produced to the non-controlled system, because of the higher prices received, the convenience of frequent pick-ups by private collectors rather than having to deliver to an often distant centre, the ability to negotiate prices, and preference for the private collectors' practice of paying immediately in cash.

A concise summary of policy constraints and the impact of these policies is presented in the APIP dairy industry study: 'The preferential classification of reconstituted milk as an essential consumer commodity acts as a disincentive to production of other products from raw milk, such as yogurt, cheese, butter, and ice cream. The main benefits of the regulations, controls, and subsidies on reconstituted milk are to the parastatal processors and both the urban population, both affluent and poor. These policies have little effect on the rural poor.'

(Unless otherwise noted, all materials from Ithica:a., 1989)

**Research Needs:** The recently completed APIP dairy industry case study is quite comprehensive; however additional analysis would be useful on the parallel market in fresh milk and ways to promote and support the development of this market when its activities are eventually legalized. (With the planned reduction of subsidy support for reconstituted milk by 1995, the redefinition of the parastatals' roles and the legalization of the parallel market are necessary considerations.) More information is also needed on consumer preferences for dairy products, consumer access to 'industrially processed' products (processed by the larger agribusiness firms as opposed to village processing), reasons for consumer participation in the parallel market, and ways to diminish unsafe consumption of untreated raw milk.

## **Subsector 15:**

## **LEGUMES**

**Description:** Principal products include chickpeas, lentils, and feves and feveroles (broadbeans). (Ministère de l'Agriculture:a, 1987) Chickpeas and feves are considered a staple food product and represent an important source of protein in the Tunisian diet.

### **Policy Constraints:**

1. GOT maintains a legal monopoly on the farm level purchasing and wholesale distribution of legumes through the Office des Cereales. However official farm level prices are generally set well below the prices which can be obtained in the 'non-controlled' parallel market, which results in a diversion of most of the crop to the parallel market.

2. Retail price regulation: retail prices for legumes are fixed at a multiple of the official producer price.(Ministère de l'Agriculture:a, 1987)

3. Restricted access to credit: seasonal farm production credit allocations (amount per hectare cultivated in chickpeas) is considered much too low (only 60% of the actual production costs per hectare). (Ministère de l'Agriculture:a, 1987)

4. Problems of administration of credit: the timing of the usual delivery of credit is reportedly inappropriate for the crop production cycle. (Ministère de l'Agriculture:a, 1987)

**Research Needs:** Little information was available; a more thorough effort should be made to assemble any other existing information, and, based on the quality of these materials, consideration should be given to undertaking a more thorough analysis of the subsector.

**Subsector 16:****SUGAR**

**Description:** Locally-produced sugar is produced from sugar beet. There are two sugar factories in Tunisia, including the Complexe Sucrier de Tunisie (CST), which processes sugar beet into white sugar and refines brown sugar into white, and La Societe Tunisienne de Sucre (STS), which processes sugar beet into white sugar. The Office de Commerce Tunisien is responsible for importing both brown and white sugar and for distributing granulated sugar. Sugar is sold at a highly subsidized consumer price which has in recent years been set considerably below the consumer price in other LDC's--in 1988 when the Tunisian price for sugar cubes was TD .340 per kilo, the equivalent price in Algeria was .385; in Turkey, .400; in Mauritania, .550, and in Senegal, .850. The cost of the sugar subsidies in 1989 was expected to total TD 39 million, although the actual cost from January-April 1989 was TD 35.1 million. The exact nature and extent of GOT controls on sugar production, processing, and distribution were not clearly specified in the recent literature. (all materials from 22/89)

**Research Needs:** Little recent information was available on local production and processing activities, costs, and potential. The upcoming APIP analysis of the Caisse General de Compensation will most likely address the sugar subsidy issue, although a broader study of the sugar subsector would be useful, including an analysis of the constraints to, the potential for, and alternative approaches to sugar production, processing, importing, and distribution.

**Subsector 17:****COTTON AND TEXTILES**

**Description:** In recent years the economic importance of the textile subsector increased dramatically; it now employs over 80,000 people and earns about 550 million dollars in foreign exchange annually, making it the second most important foreign exchange earner after oil. Cotton represents about half of the fibre inputs utilized by the Tunisian textile industry; about 90% of this cotton is imported, due to the presently limited level of local production.

Tunisian production of cotton has declined since the early 1960's (when the area in cotton reached 650 ha) due to the lack of locally adapted varieties and low productivity, the unsuitable nature of the predominant varieties for the local textile industry, price fluctuations in the world cotton market, and the dissolution in 1970 of the agency charged with promoting the cotton and textile subsectors. (Commissariat General du Textile et de l'Habillement). However because of the agronomic suitability of cotton to Tunisian agricultural conditions (particularly its ability to tolerate saline water), the significant increases in the import price of cotton in recent years, and the expanding cotton requirements of the Tunisian textile industry, since the early 1980's cotton has received increased GOT attention; in 1981 the Societe le Coton Tunisien was created to support and promote the development of the cotton subsector. By 1989 the area in cotton reached almost 400 ha, over a ten-fold increase from the area in production in the early 1980's.

The potential economic importance of the cotton subsector is based not only on the expected reduction of cotton fibre imports, but also on the potential production of products based on cotton by-products (animal feed, vegetable oil, and chemical and pharmaceutical products) and the import substitution effect of the development of these industries.

**Policy Constraints:**

1. Difficulty in obtaining seasonal and investment credit for cotton cultivation and the lack of incentives vis-a-vis those provided for other crops.
2. Low farm producer prices as compared with increasing production costs, particularly due to the high irrigation water and labour requirements of cotton production.
3. The lack of research activities and results on adapted and improved varieties, cultural techniques, plant protection, mechanization, and irrigation utilization.
4. Exclusion of cotton from OTD and other GOT pilot and demonstration farming activities, as well as from internationally-supported agricultural projects.
5. Limited agricultural extension capability.

(All materials from Ministry of Agriculture, DP, 1989).

**Research Needs:** Because of the limited attention given to this subsector, the increasing importance of textile exports and the significance of the employment generated by the textile subsector, and the increasing volume and cost of cotton imports, it would be extremely useful to have a comprehensive analysis performed of the cotton, textiles, and cotton by-products subsectors. The Ministry of Agriculture may commission CNEA to perform an industry study; however the scope of the possible study is unclear, and it is not certain that the study will be conducted.

**Subsector 18: HIDES AND SKINS/LEATHER PRODUCTS**

**Research Needs:** In recent years the production and export of high quality high value leather goods have become an increasingly important component of the Tunisian economy. No information was available to USAID on this subsector; however limited field observations and interviews suggest that it is an area of considerable potential due to the excellent design and craftsmanship of Tunisian finished leather goods (particularly clothing), as well as to their relatively low prices. A preliminary investigation of any existing sources of information should be conducted, and, depending on the quality and depth of this information, consideration should be given to supporting a comprehensive analysis of the status of the industry, constraints to its performance, and the potential for its development.

## Subsector 19:

## CROP CULTIVATION INPUTS

**Description:** In the recent past, there have been subsidies on 'improved' or 'modern' inputs, such as fertilizers, certified seeds (particularly cereals and potatoes), herbicides, and irrigation water. As part of the structural adjustment program GOT plans to gradually eliminate most of these subsidies; the aim was to diminish or remove many by the end of 1989, although the actual progress achieved is not clear. (Sources are also unclear as to the timing of the rate of reduction on individual inputs, when full removal is expected, and whether subsidies on any other inputs will remain.)

Despite the availability of consumer subsidies, not all farmers are able to take advantage of them, largely due to problems in obtaining credit for the purchase of the inputs, as well as other access problems, such as the timing and geographical availability of various inputs, particularly irrigation water. (Ministry of Agriculture, DPSAE with AIRD, 1987) Similarly, many farmers choose not to use subsidized inputs, or any modern inputs at all, because of such factors as lack of familiarity with their use and inadequate extension support, as well as reluctance to invest due to climatic uncertainty. The recent APIP study on inputs underscores 'the extremely differential impact of subsidies--large farmers benefit more than small, farmers in the north more than those in the centre and south, and cereal and vegetable producers more than the producers of other crops.' (Heureux, Rondia and Bachta, 1989)

An appraisal of the impact of policy constraints and advantages relating to inputs must take into consideration not only the effect of policies concerning inputs but also the effect of other policies within each commodity system; most notably, other taxes, duties, and controls may in effect negate the advantage theoretically provided through input subsidies. The 1987 APIP study on agricultural protection and comparative advantage emphasizes particularly the negating effect of export taxes: 'However well-intentioned these input subsidy policies have been, if the output price which farmers receive for their product is implicitly taxed vis-a-vis world market prices, then effective protection rates will be negative. (The 4 commodities investigated in this study) enjoy positive nominal protection on input prices. However all 4 are also taxed on output prices and therefore effective protection rates for all 4 are negative.' (Ministry of Agriculture, 1987)

### Policy Constraints:

1. Serious difficulties of access to seasonal credit for the purchase of inputs. This constraint was strongly emphasized in all of the major studies on inputs. The 1989 APIP fertilizer study cited a CNEA analysis that reported that the most recent data showed that only 5.6% of Tunisian farmers had utilized institutional credit during 1980-84; further, even among the larger farmers (over 20 ha), only 17% had benefitted from institutional credit. The study concluded that, in fact, subsidies on inputs should not be removed unless accompanied by measures to increase farmer access to credit: 'The elimination of subsidies is thus not advisable if not accompanied by other reforms, notably concerning agricultural credit...it is essential that the elimination of subsidies be accompanied by measures which will facilitate access to credit, especially for small- and medium-scale farmers.' (Heureux, Rondia and Bachta, 1989)

2. Difficulties in access to medium-term investment credit, particularly for irrigation equipment. (Johnson, 1988)

3. Problems of availability of necessary inputs at the appropriate time due to inefficient state-controlled distribution systems. The APIP input study noted that problems of unreliable and inefficient distribution systems, particularly for fertilizers, constituted the third most limiting constraint on the utilization of inputs (after access to credit and lack of familiarity with input usage); however, the exact nature of the remaining state controls over the importation, wholesale distribution, and retail marketing of each of various principal inputs were not specified in this analysis or in the other available studies.

4. Restrictions on the availability of high quality, high yielding seeds and planting materials. (The American Soc. of Agricultural Consultants Int'l, 1989) Although the specific nature of the restrictions was not elaborated, because the source noted that these restrictions had been removed for foreign investors producing for export, the authors may have been referring to various import restrictions, such as quotas, access to foreign exchange, duties, and licenses.

**Research Needs:** Although much analysis has been done of input pricing and the cost of subsidies, very little is actually understood about farmer utilization of inputs and various different types of constraints to their usage (other than problems of access to credit). As the APIP fertilizer study noted: 'Very little is known about real demand for agricultural inputs, as opposed to recommended input use rates. Who are the farmers who use improved inputs? What commodities do they apply them to, on what size farms? From whom do they procure their supplies, and at what price?' Further analysis is particularly needed on distribution systems for each of the principal inputs (including state controls on distribution, the activities of private firms, and any parallel markets which may exist), distribution constraints which may be due to government policies and their implementation, any other types of constraints. More work is also needed on various subsectors other than cereals--much of the existing data and analysis addresses problems of input access and use among cereal farmers. Further analytical support will also be necessary to assist GOT in designing concrete solutions to the problems associated with the reduction and removal of the remaining subsidies.

**Subsector 20:****ANIMAL FEED****Policy Constraints:**

1. The Office of Cereals still retains monopoly control on the importation of animal feed protein supplements and other basic cereal inputs, such as barley, corn, sorghum, and soybean meal. (TDP, 1989) For animal feed producers, this results in a lack of choice and control over input selection; the producers are sometimes obliged to use inputs with which they are not familiar (as was the case recently due to the OC decision to import sorghum instead of other desired inputs). (Larbi, 1989) This lack of familiarity with inputs results in the inability of animal producers to gauge conversion rates (the ratio between the feed consumed and the growth rates of the animals). Thus there is a need to open up cereal imports to the private sector. (Newman, Ladd, Boughzala and Amar, 1989)

2. OC sells cereal inputs at fixed prices to the feed mix companies; in most recent years the domestic sale price to feed companies was subsidized; however OC expects to remove these subsidies by the end of 1989. (Newman, Ladd, Boughzala and Amar, 1989)

3. The retail prices of feeds are also set by GOT and have been highly subsidized in most years; however these subsidies are also expected to be removed in late 1989.

**Research Needs:** APIP is undertaking an analysis of subsidy reductions in animal feeds; the exact scope of this analysis is not clear. It might be useful to undertake a broader investigation of the feed industry, including an analysis of such issues as the preferences and demand of feed companies and animal producers, as well as quality control needs within the industry.

## Annex 3

### THE IMPORTANCE OF SMALL-SCALE FIRMS

In the literature which was reviewed, there were no documents concerning the magnitude of small-scale firms in the agribusiness sector, their specific activities, or their particular constraints.

There was some information concerning the numbers of firms according to scale, however, the data presented may be largely based on government business registration records (whereas, most likely, many of the smaller firms may not be registered). Further, because of the apparent lack of precise data and information on small and micro enterprises, the sources may have discussed only the large and medium scale firms, without explicitly noting this focus. For example, studies on the cereals subsector often discuss only "the 24 cereal mills", without explaining that there are 24 large and medium scale industrial mills operating in the controlled system, but that there also could be between 2000 and 3600 small scale mills handling the grain which is consumed and distributed at the farm level, as well as the grain which is marketed through the parallel system (Mock, 1979). In fact these small mills process over 50% of the cereals consumed annually in Tunisia, so the failure to note their role in any analyses of the cereals subsector is indeed an oversight.

The information in the literature reviewed concerning the magnitude of small scale firms in the agribusiness sector is outlined below.

1. Date exporters are predominately small scale - the 17 principal exporters handle about 80,000 tons of exports annually. (Abbott and Rassas, 1987).
2. Several important export lines of fresh produce (fruits and vegetables) are handled (exclusively or almost exclusively) by 15 to 20 independent small enterprises selling through commission agents (Abbott and Rassas, 1987).
3. The vegetable subsector is characterized by large numbers of small independent producers whose operations are based on family labour; some of these producers are organized into cooperatives (Abbott and Rassas, 1987).
4. The citrus subsector includes approximately 10,000 producers, most of whom are small scale (average citrus acreage is 1.36 ha.; 85% of citrus producers own less than 2 ha. of citrus trees, while 69% cultivate less than 1 ha.) (Ithaca International Ltd.:c, 1989).
5. Citrus is exported by 18 firms, many of which are small scale (Abbott and Rassas, 1987).
6. 80% of the fresh milk consumed is collected and marketed by very small firms (The American Soc. of Agricultural Consultants Int'l, 1989).
7. Approximately 60% to 75% of the wheat products consumed and all of the barley is processed by small scale mills (Mock, 1979).
8. The animal feed processing industry, which includes 219 firms, is characterized by the small scale of the firms (Omezzine, 1988).
9. 60% of vineyard area is managed by cooperatives of small growers (Abbott and Rassas, 1987).

Annex 4

ESTIMATED NUMBERS AND TYPES OF AGRIBUSINESS FIRMS

SUBSECTOR	TYPES OF FIRMS BY FUNCTION	EST. NO. OF FIRMS
Olive Oil	Olive Oil Presses	1085-1500
	Location:	
	Northern region	(192)
	Central region	(536)
	Southern region	(387)
Olives, Capers	Processing and packing	15-20
Fruits, Vegetables	Tomato concentrate production	40
	Other fruit/vegetable processing	5
	Wholesale markets	42
	Retail markets	176
	Weekly souks (wholesale/retail)	154
	Cold storage	61
	State-owned	(23)
	Private	(38)
	Packing stations (Cooperatives de Service)	10
Raisin production (grape drying)	1	
Dates	Processing/packing	25
Almonds	Processing/packing	12
Wine	Wineries	37
	GOT (Office des Terres Domaniales)	(10)
	State-owned cooperatives	(12)
	Private	(15)
Spices, Aromatics Ocean Products	Processing	13
	Fish wholesale markets	13
	Seafood processing, canning	23
	Seafood freezing	25
Cereals	Large industrial mills	24
	Small mills	2000-3500
	Bakeries (licensed)	1764
	Biscuit, cookie production (licensed)	18
	Pasta factories	
Animal Feed Mills		219
Legumes	Processing (drying)	12
	Processing (canning)	5
Livestock 164	Livestock markets	
	Slaughterhouses	179
	Butchers (licensed)	1145
	Retail sales points	9700
	Meat processing	3

Poultry	Animal production (pouaillers)	3119
	Functioning	(2507)
	Out of production	(540)
	Incubators (couvoirs)	14
	Hatcheries	63
	Slaughterhouses	4-8
	State-owned	(2)
	Private	(2-6)
Dairy	GOT milk collection centres	71
	Reconstituted powdered milk (2 parastatals)	4
	Yogurt, ice cream, cheese (private)	32
Sugar	Processing	2
Coffee	Processing (roasting)	40
Tea	Processing, packaging	2

**Note:** These numbers indicate the numbers of firms performing a particular function; an individual firm may perform more than one function--i.e. produce more than one product. Therefore the actual number of agribusiness firms will be less than the numbers of firms performing particular functions. These numbers also indicate estimates presented in the literature; they are most likely incomplete (underestimates) in many cases, since they may enumerate mainly the large- and medium-scale firms, due to the frequent lack of data and information on small and micro enterprises.