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PROJECT PERFORMANCE ASSESSMENT REPORT

TUNISIA

**AGRICULTURAL SUPPORT SERVICES PROJECT
(LOAN NO. 7063IBRD-700630)**

June 27, 2013

IEG Public Sector Evaluation
Independent Evaluation Group

Currency Equivalents (annual averages)

(Exchange Rate Effective: December 31, 2008)

Currency Unit = Tunisian Dinar (TD)

TD 1.00 = US\$ 0.77

US\$ 1.00 = TD 1.30

Abbreviations and Acronyms

APIA	Agricultural Investment Promotion Agency
CAS	Country Assistance Strategy
DGFIOP	Directorate General of Finance, Investments and Professional Organizations
EU	European Union
GDA	Agricultural Development Group
GIP	Inter-Professional Organization
ICR	Implementation Completion and Results report
IEG	Independent Evaluation Group
IEGPS	IEG Public Sector Evaluation
MAHR	Ministry of Agriculture and Hydrologic Resources
PMU	Project Management Unit
PPAR	Project Performance Assessment Report

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This report was prepared by April Connelly, with input from Camille Konate and Maamri Akremi who also provided support for the IEG mission to Tunisia in October 2012. The report was peer reviewed by Adesimi Freeman and panel reviewed by Soniya Carvalho. Marie Charles provided administrative support.

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Principal Ratings

	ICR*	ICR Review*	PPAR
Outcome	Moderately Satisfactory	Moderately Satisfactory	Moderately Unsatisfactory
Risk to Development Outcome	Moderate	Moderate	Significant
Bank Performance	Moderately Unsatisfactory	Moderately Unsatisfactory	Moderately Unsatisfactory
Borrower Performance	Moderately Satisfactory	Moderately Satisfactory	Moderately Unsatisfactory

* The Implementation Completion and Results (ICR) report is a self-evaluation by the responsible Bank department. The ICR Review is an intermediate IEG product that seeks to independently verify the findings of the ICR.

Key Staff Responsible

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IEG Mission: Improving World Bank Group development results through excellence in independent evaluation.

About this Report

The Independent Evaluation Group assesses the programs and activities of the World Bank for two purposes: first, to ensure the integrity of the Bank's self-evaluation process and to verify that the Bank's work is producing the expected results, and second, to help develop improved directions, policies, and procedures through the dissemination of lessons drawn from experience. As part of this work, IEG annually assesses 20-25 percent of the Bank's lending operations through field work. In selecting operations for assessment, preference is given to those that are innovative, large, or complex; those that are relevant to upcoming studies or country evaluations; those for which Executive Directors or Bank management have requested assessments; and those that are likely to generate important lessons.

To prepare a Project Performance Assessment Report (PPAR), IEG staff examine project files and other documents, visit the borrowing country to discuss the operation with the government, and other in-country stakeholders, and interview Bank staff and other donor agency staff both at headquarters and in local offices as appropriate.

Each PPAR is subject to internal IEG peer review, Panel review, and management approval. Once cleared internally, the PPAR is commented on by the responsible Bank department. The PPAR is also sent to the borrower for review. IEG incorporates both Bank and borrower comments as appropriate, and the borrowers' comments are attached to the document that is sent to the Bank's Board of Executive Directors. After an assessment report has been sent to the Board, it is disclosed to the public.

About the IEG Rating System for Public Sector Evaluations

IEG's use of multiple evaluation methods offers both rigor and a necessary level of flexibility to adapt to lending instrument, project design, or sectoral approach. IEG evaluators all apply the same basic method to arrive at their project ratings. Following is the definition and rating scale used for each evaluation criterion (additional information is available on the IEG website: <http://ieg.worldbankgroup.org>).

Outcome: The extent to which the operation's major relevant objectives were achieved, or are expected to be achieved, efficiently. The rating has three dimensions: relevance, efficacy, and efficiency. *Relevance* includes relevance of objectives and relevance of design. Relevance of objectives is the extent to which the project's objectives are consistent with the country's current development priorities and with current Bank country and sectoral assistance strategies and corporate goals (expressed in Poverty Reduction Strategy Papers, Country Assistance Strategies, Sector Strategy Papers, Operational Policies). Relevance of design is the extent to which the project's design is consistent with the stated objectives. *Efficacy* is the extent to which the project's objectives were achieved, or are expected to be achieved, taking into account their relative importance. *Efficiency* is the extent to which the project achieved, or is expected to achieve, a return higher than the opportunity cost of capital and benefits at least cost compared to alternatives. The efficiency dimension generally is not applied to adjustment operations. *Possible ratings for Outcome:* Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

Risk to Development Outcome: The risk, at the time of evaluation, that development outcomes (or expected outcomes) will not be maintained (or realized). *Possible ratings for Risk to Development Outcome:* High, Significant, Moderate, Negligible to Low, Not Evaluable.

Bank Performance: The extent to which services provided by the Bank ensured quality at entry of the operation and supported effective implementation through appropriate supervision (including ensuring adequate transition arrangements for regular operation of supported activities after loan/credit closing, toward the achievement of development outcomes. The rating has two dimensions: quality at entry and quality of supervision. *Possible ratings for Bank Performance:* Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

Borrower Performance: The extent to which the borrower (including the government and implementing agency or agencies) ensured quality of preparation and implementation, and complied with covenants and agreements, toward the achievement of development outcomes. The rating has two dimensions: government performance and implementing agency(ies) performance. *Possible ratings for Borrower Performance:* Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

Preface

This is a Project Performance Assessment Report (PPAR) of the Tunisia Agricultural Support Services Project (IBRD-70630). The project was approved on June 26, 2001 and became effective on February 2, 2002. The total project cost at appraisal was US\$ 42.45 million. It was financed by an IBRD credit of US\$21.33 million equivalent. At project closure, US\$23.66 million equivalent had been disbursed. US\$4.8 million equivalent of the original loan amount was cancelled due to cost savings related to exchange rate fluctuations and an overestimation of technical assistance and training costs. The project closed in December 2008, 18 months after its originally planned closing date of June 2006.

This report is based on a review of project documents, including the Implementation Completion and Results Report, the Project Appraisal Document, legal documents and project files, and on discussions held with Bank staff involved in the project. It is also based on an IEG assessment mission to Tunisia that was conducted from October 1 to October 19, 2012. IEG held meetings in Tunis and conducted site visits in the department of Beja to interview farmers and producers' organizations. The mission expresses its appreciation for the generous time and attention of the Borrower and all concerned parties. A list of persons met during the IEG mission is in Annex C.

IEG selected this project for a field assessment in order to verify its results and assess their sustainability in the aftermath of the 2011 Tunisian Revolution. This evaluation will also serve as an input into the IEG Country Program Evaluation of Tunisia.

Following standard IEG procedures, copies of the draft report have been sent to government officials and agencies for their review and comment. No comments were received.

Summary

This report assesses the development effectiveness of the Tunisia Agricultural Support Services Project (2001-08). At the time that the project was prepared, Tunisia's agricultural sector was shifting from an emphasis on food self sufficiency and production for the domestic market to increasing integration in the world market.

Past government policies and support to the agricultural sector had been focused exclusively on maximizing production volume. With the signing of new trade agreements, there was a need to turn attention to increasing the quality and competitiveness of Tunisia's agricultural products to take advantage of potential new markets and enhance their ability to compete with imports entering the domestic market. Agricultural services at the time were supply-driven and studies had shown a weak link between service supply and production response. The project was conceived to address the need for better quality agricultural services that are relevant to the challenges of market driven agriculture by moving to a more demand-driven approach with producers setting the agenda.

The project was designed as the first half of a ten-year program to reform agricultural services. The goals of the overall ten year program were to enhance the competitiveness of the Tunisian agriculture sector by improving production quality, competitiveness, and market access. The project's development objectives as stated in the Legal Agreement were to assist the Borrower in implementing its national program for the development of agricultural services and to support the growth of a high quality, high value added and sustainable agriculture, through improved market access and strengthening of agricultural producers' organizations and services. Only the first five-year phase of the program was implemented.

The project improved key stakeholder's understanding of the demands of the international market. Quality standards and laboratory upgrades enhanced Tunisia's capacity to meet international standards for export. Agricultural research is now better documented and a broader number of stakeholders have input to the research agenda. Improvements were also made in the coverage of livestock vaccinations and the animal identification system. Laboratory upgrades have enhanced Tunisia's capacity to meet international standards for the export of agricultural products, control the quality of agriculture inputs and improve animal health diagnostic capacity. Nevertheless, European Union accreditation for laboratories has not been obtained. The project also improved the stock of information available to decision makers and more information is now available to the public than was previously the case. But there is little evidence of the extent to which policy makers and farmers are using this information for decision making. There was little progress in strengthening producer organizations. Many of the organizations supported by the project did not represent the interests of their members and the technical assistance provided was insufficient for achieving the pilot's objective. The project did not succeed at developing greater private sector participation in the provision of agricultural extension services, but had greater success at transferring livestock services to the private sector with positive results. However, there is little available evidence to assess the cost effectiveness of agricultural services. Many of the cost recovery efforts envisaged did not materialize and the project did not monitor cost effectiveness of the

other services it supported. Overall, there is little data available to substantiate the extent to which project achievements have led to the ultimate goal of providing higher quality agricultural services that respond to farmers' perceived needs and are cost effective.

The outcome of the project is rated as moderately unsatisfactory. The project objectives were substantially relevant to the development priorities laid out in both government and Bank strategy documents at the time of appraisal and remain relevant to the current needs in Tunisia's agriculture sector. Relevance of design was modest owing to weaknesses in the results framework. Both the objectives of supporting the growth of high quality, high value added agriculture and supporting sustainability were modestly achieved. Achievement of the objective of strengthening producers' organizations and services was negligible. Efficiency in implementing the project was modest.

The risk to development outcome is rated as Significant. Most activities that were successfully completed under the project have continued under the government budget. But there has been little progress in resolving issues that were pending at project closure and a second phase intended to consolidate the developments initiated under the project was not approved. Some of the gains in meeting international export standards are at risk from the failure to obtain European Union accreditation of laboratories. Following the 2011 Revolution, the legitimacy of producer organizations has further eroded and this poses a challenge for reaching out to farmers in an organized manner to further the project's attempts to create demand driven services.

Bank performance is rated moderately unsatisfactory as is Borrower performance. The Bank did well in identifying a project of substantial relevance to government priorities and the emerging challenges in the agriculture sector and provided frequent implementation support. However, quality at entry suffered from faulty assumptions about the viability of producer organizations, complex implementation arrangements, insufficient risk identification and mitigation, and inadequate design of monitoring and evaluation. Moreover, the complex project design proved to be difficult to implement. The Borrower was engaged in the project throughout a long preparation and implementation period. However, there was a shortfall in the counterpart commitment and legislation passed during implementation restricting agricultural development groups from participating in commercial activities, was counterproductive to achieving the project objectives. The technical agencies performed well despite the complexity of the project. However, all of the agencies struggled with procurement, leading to implementation delays. The use of one Project Management Unit that had insufficient leverage over the other agencies proved to be problematic, particularly with respect to its coordination role. The project management unit was also understaffed and monitoring and evaluation did not receive sufficient attention from supervision missions or the project management unit.

The project experience points to the following lessons:

The benefits of a comprehensive project design can be outweighed by complexity, difficulty in implementation, and resources being spread too thin, even in a middle-income country like Tunisia. The project was designed to modernize agricultural support services through a single project with several components and 12 implementing agencies

rather than through multiple more focused projects because it was thought that a single project would be easier to supervise and control, allow for greater operational synergies, and avoid fragmentation. In practice, this did not prove to be the case. The multiple components were fragmented with no real coordination and resources were spread too thin to make a strong impact in any one area.

The effectiveness of complex projects implemented by multiple actors can be undermined unless the project management unit (or its parent agency) has sufficient authority to proactively coordinate key implementation agencies. Implementation of this project was carried out by twelve executing agencies. The project management unit was located within one of the Ministry of Agriculture Directorates, which is at the same hierarchical level as the other executing agencies. It did not have sufficient leverage over the other agencies to play a proactive role in coordination.

Attempts to move from public to private provision of services can be undermined if there is not sufficient attention to beneficiary, needs, perceptions, and incentives, both for producers and service providers. Substitution of public for private extension services can be difficult because farmers are often reluctant to pay for extension services that they may not perceive as relevant to their needs. The services selected for private provision should be identified with this in mind. The project's attempt to move to private provision of crop extension services was hurt by the lack of market demand for the services provided and inadequate assessment of farmers demand and willingness to pay. In contrast, the sanitary mandate, whereby the state contracts the private sector to implement certain animal health services in the national interest, and government subsidies contingent on the cattle being vaccinated guaranteed that there would be sufficient demand for the private veterinarians mobilized to carry out vaccination campaigns.

Monitoring and Evaluation is an important tool for project coordination. In complex projects with many components and multiple implementing agencies the presence of sound and measurable monitoring and evaluation indicators is key for gauging whether disparate activities are making collective progress to meeting the projects objectives. Inadequate evaluation of pilots reduces the scope for learning and improving effectiveness.

Lack of ownership of producer associations by farmers limits their utility in providing farmers with inputs, access to services and inserting their interests into agricultural policy. In this case the benefits of association were not realized because the associations lacked buy-in and ownership from the farmers that they were supposed to represent. There was little active participation of their members who viewed these groups as arms of the government that did not represent their interests.

Caroline Heider
Director-General
Evaluation

1. Background and Context

1.1 Agriculture's contribution to growth fluctuates widely, mainly due to rainfall variation. In 2001 accounted for 12 percent of GDP and employed about one fourth of the labor force (World Bank 2005). Since 1989 agriculture has kept pace with overall economic growth. The four most important products in terms of volume are wheat, olives, milk, tomatoes. Tree crops (olives, dates, citrus) have been the main agriculture exports. Tunisia has a comparative advantage in the production of fruits and vegetables and its European Union quotas for these crops are underused (World Bank 2006).

1.2 Since 1989 Tunisia has undertaken substantial agricultural policy reforms, supported in part by two World Bank structural adjustment loans (ASAL I and II) and two policy loans. Subsidies for fertilizer, animal feed, seed, irrigation, and mechanized services have been substantially reduced. The supply of farm inputs, collection of produce, and the provision of mechanized plowing and harvesting have been privatized. Progress has been slower, however, in liberalizing food marketing, with the state remaining involved in cereals, milk, olive oil, sugar, tea, coffee, and tobacco (IEG, 2005).

1.3 At the time that the project was prepared, in early 2000, Tunisia's agricultural sector was shifting from an emphasis on food self-sufficiency and production for the domestic market to increasing integration in the world market. Past government policies and support to the agricultural sector had been focused on maximizing production. With the signing of new trade agreements,¹ there was a need to turn attention to increasing the quality and competitiveness of Tunisia's agricultural products to take advantage of potential new markets and enhance their ability to compete with imports.

1.4 Agricultural services play an important role in the growth of a competitive commercial agriculture sector. In Tunisia agricultural services are supply-driven and evaluations had found widespread dissatisfaction among farmers with their quality and the method of service delivery (World Bank 2001). In developed countries, private producer organizations take the lead in providing their members with marketing services, market information and technology. Several types of agricultural producer organizations operate in Tunisia but they are effectively under the control of state-run institutions and have little financial independence, which limits their responsiveness to markets and makes it difficult for them to become farmer-owned entities (World Bank 2006). At project appraisal, few producers were members of producer organizations and national level organizations with potential to penetrate higher value markets were weak (World Bank 2001). Annex B presents the different producer organizations and their governance structures.

¹ Tunisia started to liberalize its agriculture after the signature of the General Agreement on Tariffs and Trade, and took part in the trade talks on agriculture held under the auspices of the World Trade Organization at the end of 1999. Tunisia has signed bilateral free trade zone agreements with Morocco, Egypt, Jordan, Libya and Syria, and regional free trade agreements with the European Union, Arab League Member States, and Mediterranean Arab countries.

1.5 The project was conceived to address the need for better quality agricultural services that are relevant to the challenges of market-driven agriculture by moving to a more demand-driven approach with producers setting the agenda. The rationale for the project presented in the project appraisal document was that as producers increasingly drive the system and begin to pay more for it, service supply and demand would adjust to meet demand in areas of economic profitability. As part of a needs assessment carried out during project preparation, producers expressed the strongest need for: (i) timely and relevant technology; (ii) advisory services and training to improve productivity and reduce costs, in order to increase revenue; (iii) information and advice on market outlets and requirements; and (iv) producer and industry organizations that would ensure service delivery, improve marketing, and represent and defend producer interests.

2. Objectives, Design, and their Relevance

Objectives

2.1 The project development objective as stated in the Legal Agreement was “to assist the Borrower in implementing its national program for the development of agricultural services and to support the growth of a *high quality, high value added and sustainable* agriculture, through *improved market access and strengthening of agricultural producers’ organizations and services.*” Thus, the Legal Agreement points to three intended outcomes – high quality, high value added, and sustainable agriculture-- to be achieved via two intermediate outcomes – improved market access and strengthening agricultural producers’ organizations and services.

2.2 The project appraisal document states the development objectives as, “(t)he project is the first phase of a longer term (ten year) program that aims at improving production quality, competitiveness [sic] and market access, particularly for smaller and medium scale producers. To this end, the project objectives are to: 1. Develop, on a pilot basis, organizational structures for producers that represent their needs and interests. 2. Improve the institutional capacity and quality of agricultural services delivered by public and private institutions and producer organizations. 3. Improve the flow of information for all sector stakeholders” (World Bank 2001, p. 2). Thus, the appraisal document points to anticipated outcomes of the government program (production quality, competitiveness, and market access), and expresses the explicit objectives for the project in terms of actions or activities that are the means to those ends. It does not mention two outcomes in the legal agreement – high value added production and sustainability – and leaves out the strengthening of agricultural producers’ organizations and services, although the pilot organizational structures would seem to support such an outcome. The key performance indicators in the appraisal document include the following outcomes -- new market niches, conformance of produce with domestic and international norms and standards, more competitive producers and production systems, and greater capacity of small and medium scale producers as evidenced by internationally competitive production.

2.3 The government's policy letter annexed to the appraisal document sheds light on the intended outcomes of the first phase of reforms covered by this project, among them strengthening producer organizations, sustainability of service provision, and strengthening essential public services (World Bank 2001, pp. 75-76).² Sustainable services are described as those involving cost-sharing and cost recovery, and greater private sector participation in providing services (including contracting). The policy letter also confirms that the operation will adopt a regional approach and will target to small and medium producers with commercial potential and to female farmers.

2.4 This review uses the articulation of the project development objectives presented in the legal agreement as the basis of assessment, as they are outcome-oriented, are confirmed by the letter of government policy to be consistent with the expected outcomes of the first phase project, and are legally binding. Further, the activities of the more narrowly articulated and output-oriented statement of project-specific objectives in the appraisal document as well as the suggested outcome indicators are consistent with these objectives.

Relevance of The Objectives

2.5 *Relevance of the project development objectives is rated Substantial.* The project's objectives were well aligned to priorities outlined in both government and World Bank strategies in place at appraisal and remain relevant to current strategies. At the appraisal stage, the project objectives were in line with the priorities of the Bank's Country Assistance Strategy (2000-2002) that called for improving the competitiveness of agriculture and providing support to increase rural living standards. The project was also intended to implement the integrated and coordinated reform process envisaged in the Government's plan for agricultural services (2001-2010). The project objectives are also relevant to the Bank's Country Assistance Strategy in place at project closure (2005-08), which states that in order to strengthen the business environment to support the development of a more competitive, internationally integrated private sector and improve competitiveness of the Tunisian economy six outcomes need to be achieved, including "improved competitiveness of agriculture while ensuring that social and environmental concerns are properly addressed." The objectives remain relevant to the World Bank's current interim strategy note (2013-2014) goals of strengthening the business environment and deepening trade integration. Finally, project objectives are pertinent to Tunisia's current National Development Plan (2010-2014), which calls for actions to enhance the agricultural competitiveness through quality improvements and the establishment of standards to different products.

Design

2.6 The project was designed to be the first five-year phase of a longer ten-year program. It financed the following components:

² This material is also summarized on pp. 5-6 and pp. 8-9 of the project appraisal document (World Bank 2001).

2.7 Component 1. Building the capacity of agricultural producers and inter-professional organizations (Appraisal Cost US\$ 5.26 million, Actual Cost US\$ 2.31 million). The component supported organizational structures for producers that would represent the producers' needs and interests and have capacity to improve market access and to provide, manage, and finance services to their members. It supported a pilot project to strengthen the capacity of local and regional producer organizations to demand, manage, and provide services. It also supported quality improvement and capacity building for national Inter-professional Organizations to improve product quality and develop new markets and brand images for Tunisian produce.

2.8 Component 2. Strengthening the supply of research, training, and farming advisory services (Appraisal Cost US\$10.03 million, Actual Cost US\$ 9.28 million). The component supported the development of accountable public, cooperative and private services that deliver relevant and cost effective producer services focused on increasing quality, value added, and market access. This included support to strengthen and regionalize agricultural research including the introduction of a selective or competitive grant system, creation of a unified research institute and regional research centers, user participation in setting the research agenda, and creation of an information clearing house on agricultural technology. It also supported a pilot project to improve producer access to training and farming advice through setting up a demand-driven advisory service in six pilot areas, and reinforcement of women's extension, and support to strengthen agricultural training.

2.9 Component 3. Livestock and animal health (Appraisal Cost US\$8.74 million, Actual Cost US\$ 4.57 million). The component was to support the improvement of services in animal production and health, including: diagnostic services; animal identification; training; further transfer of services to the private sector; and increasing the share of producers in paying for certain services.

2.10 Component 4. Plant protection and seed and plant certification (Appraisal Cost US\$6.44 million, Actual Cost US\$ 4.97 million). This component was to strengthen the capacity for plant protection and seed certification by expanding the pesticide residue and seed testing capacity; developing monitoring and surveillance capability on trade in plant products; and improving awareness about cost effectiveness and sustainability of integrated pest management.

2.11 Component 5. Strengthening public interest services and project management support (Appraisal Cost US\$4.98 million, Actual Cost US\$ 3.33 million). This component aimed to increase the availability of agricultural statistics and information for all sector stakeholders. Activities include: (1) strengthening of agricultural statistics; (2) upgrading of the annual crop and fish forecasting system; and (3) strengthening the agricultural information system by broadening its coverage and allowing maximum access to all relevant information. It also was to support project management.

2.12 Implementation arrangements. A total of twelve implementing agencies, all of which are within the Ministry of Agriculture and Water Resources or report to it, were involved in implementation. A coordinator was designated within each implementing

agency. When more than one implementing agency was involved in any component, one unit was designated as the lead and was responsible for coordinating the implementation of the whole component. Each directorate was responsible for the planning and implementation of its own activities. Procurement was carried out by each of the implementing units, under the supervision of the project management unit. Table 1 lists the implementation arrangements for each of the project's subcomponents.

2.13 The Project Management Unit was established within the Ministry of Agriculture's General Directorate of Finance, Investments, and Professional Organizations, and charged with overall coordination of the project, including consolidation of reports and project information provided by the implementation units, supervision of procurement and environmental assessments, carrying out monitoring and evaluation and serving as principal counterpart for supervision missions. The project management unit was also to act as secretariat to the project's coordination committee and was responsible for ensuring that coordination committee decisions were carried out. The General Directorate was also responsible for implementation of the producers' organization component.

2.14 A project coordination committee was created that was to be chaired by the minister of Agriculture and comprise the heads of each of the implementation units, representatives of other relevant ministries, and producer representatives. The coordination committee's role was to approve annual work programs and budgets, review end-of-year reports, financial accounts and audits, and periodic supervision reports.

Table 1: Project components and respective implementing agencies

<i>Project component / sub-component</i>		<i>Implementing Agency</i>	<i>Specific Role / Scope of Responsibility</i>
Component 1 Building the capacity of farmer organizations	Producer organizations pilot	General Directorate of Finance, Investments and Professional Organizations	Oversee implementation of the producers' organization subcomponent carried out by regional agricultural centers in pilot governorates.
	Quality improvement and capacity building for Inter-professional Organizations	Agricultural Investment Promotion Agency	Implementation of the quality improvement sub-component, including supervising the work program of the Inter-professional Organizations.
Component 2 Strengthening the supply of research, training and farming advisory services	Agricultural research	Institute of Agricultural Research and Higher Education	Implementation of strengthening the supply of research component.
	Farming advisory services pilot	Agricultural Extension and Training Agency	Component coordination and implementation agricultural training activities and advisory service pilot (in coordination with the regional agricultural centers in the pilot governorates).
	Agricultural training		
Component 3 Livestock and		Directorate General of Animal	Component coordination and

animal health		Health	implementation of the disease monitoring and control program, diagnostic capacity, and development of private veterinary and livestock services activities.
		Livestock and Rangeland Organization	Implementation of the animal identification activities.
		Tunisian Veterinary Research Institute	Implementation of animal and fish products safety activities (laboratories).
Component 4. Plant protection and seed certification		The Plant Protection and Quarantine Service	Implementation of entire component.
Component 5 Strengthening public interest services and project management	Agricultural statistics and information	General Direction of Agricultural Development Studies	Component Coordination and implementation of the activities to strengthen agricultural statistics
		National Agriculture Observatory	Implementation of activities to strengthen access to agricultural information.
		Directorate General of Fisheries	Implementation of the fish harvest forecasting activities.
		Directorate General of Agricultural Production	Implementation of the crop harvest forecasting activities.
	Project Management	General Directorate of Finance, Investments and Professional Organizations	Project management unit

Relevance of Design

2.15 ***Relevance of project design is rated modest.*** The project supported many activities that are relevant to achieving its objectives but the relevance of design was weakened by shortcomings in the results chain.

2.16 With respect to the first objective, strengthening agriculture producers' organizations and services, there were critical gaps in the activities supported by the relevant component. The project included activities to strengthen the financial management of existing producer organizations, but it did not include activities to improve the governance structure of these entities, which was critical for ensuring that they actually represent farmers' interests.

2.17 With respect to the second objective, supporting high quality, high value added agriculture, the results chain was weakened by a lack of attention to constraints in the enabling environment which undermine the incentive that producers have to take on the higher production costs associated with higher quality production. These include agriculture and marketing policies that control wholesale prices of some products and restrict retail margins, limited access to agricultural credit, the fragmented nature and small size of farm plots, lack of drought mitigation measures, and an aging farm population. (World bank 2006, 2012, African Development Bank 2012)

2.18 With respect to the third objective of promoting sustainability of agricultural services, the project included a number of activities relevant to achieving the objective in terms of improving cost effectiveness and enhancing the participation of private actors in provision of services. But there were gaps in assessing farmers' incentives to pay for services and a lack of attention to the impact of Tunisia's central fiscal policy on the effectiveness of instituting user fees.

Monitoring and Evaluation Design

2.19 At appraisal, key performance indicators were defined for each objective and intermediate output indicators were specified for each of the project's sub-components. But the indicators lacked quantified targets and no baseline data were collected. Some of the key performance outcome indicators were not sufficiently specific, such as "a more competitive production system evolves" and "new Tunisian products are increasingly known and competitive on local and international markets, and new market niches open." The project appraisal document clearly defines monitoring and evaluation arrangements, designating monitoring and evaluation responsibility to the project management unit with the expectation that the unit would include a monitoring and evaluation specialist. Provisions were also provided for consultant support for methodology, for a baseline survey and for the mid-term review to be conducted with consultants that would include an interim evaluation of impacts and outcomes.

3. Implementation

3.1 The project was approved in June 26, 2001 and became effective on February 2, 2002. Total project costs were estimated at US\$42.45 million equivalent. The project was financed by an IBRD loan of US\$21.33 million equivalent. At project closure US\$23.66 million equivalent had been disbursed.³ The equivalent of US\$4.8 million of the original loan amount was cancelled due to cost savings related to exchange rate fluctuations and an overestimation of technical assistance and training costs. The government was expected to provide US\$16.69 million in counterpart funds. By project completion, however, it had only supplied US\$5.8 million, 35 percent of its commitment.⁴ US\$4.43 million in co-financing from an unidentified source was also anticipated at appraisal but did not materialize. The project closed in December 2008, 18 months after its originally planned closing date of June 2006.

3.2 Table 2 summarizes the total project costs as planned, versus actual disbursements against each of the components.

³ The loan was made in Euro terms. The total commitment was EURO 30.9 million, EURO 23.95 million was disbursed and EURO 6.95 million was cancelled. The final loan disbursement in the US\$ equivalent appears to be higher than the total US\$ equivalent loan commitment because of changes in the exchange rate over the course of project implementation period.

⁴ IEG was not able to find the reason for the shortfall in the government counterpart contribution.

Table 2: Project Cost by Component (in USD million equivalent)

<i>Components</i>	<i>Appraisal Estimate (USD millions)</i>	<i>Actual/Latest Estimate * (USD millions)</i>	<i>Percentage of Appraisal</i>
1.1 Support to agricultural producers organizations	1.80	0.48	27
1.2 Quality improvement	3.46	1.83	53
2.1 Agricultural research	7.62	7.90	104
2.2 Pilot to improve producer access to training and farming advice	9.20	1.38	15
3. Livestock and animal health	8.75	4.57	52
4. Plant protection and seed and plant certification	6.44	4.97	77
5.1 Agricultural statistics and information	3.37	3.33	99
5.2 Project management support	1.61	Not reported	
Total project costs	42.24	24.46	58
Front-end fee IBRD	0.21		
Total Financing Required	42.45		

Source: World Bank 2009

* This column was taken from the project implementation and completion report and does not reflect the full project costs which were US\$29.46 million. IEG was not able to obtain the correct breakdown by component.

3.3 The project's objectives and design were not changed during the course of project implementation but there were some changes in the scope of activities covered. The loan agreement was amended in November 2004 to eliminate the dated covenant related to the creation of a unified agricultural research institute, by merging three existing research institutes. This measure was originally meant to improve internal efficiency and cost effectiveness of agricultural research through better use of all human, physical and financial research resources and avoid duplication of facilities. The government decided not to implement the merger, due to too much internal resistance by researchers in the various institutes proposed for restructuring. The government concluded that the potential benefits of the merger would not outweigh the institutional and social costs.

3.4 Following the mid-term review in May 2005, the scope of activities under component 4 changed. Equipment was added to strengthen the capacity of laboratories for fertilizer analysis, the detection of genetically modified proteins, pesticide analysis, seed analysis, viral control, and a catalogue station. Support for three fumigation stations and construction of three regional stations were abandoned in favor of less expensive mechanisms to accomplish the same tasks. A reallocation of funds across disbursement categories was also carried out to reflect (i) an increase in funds for civil works for the research component to upgrade research centers; (ii) an increase in the "goods" category to purchase additional lab equipment required following an EU needs assessment for laboratory accreditation and purchase of scientific equipment for post-harvest activities under the quality component; (iii) a decrease in consultant services due to coverage of some technical assistance by the EU; and (iv) removal of "research sub-projects" that the government was financing through its own budget.

Implementation Experience

3.5 Project implementation was challenged by several factors.

3.6 ***Procurement proved to be a significant challenge for the implementing agencies to manage, resulting in a very slow project start up and implementation delays that led to an 18 month extension of the project closing date.*** Procurement was carried out by the individual implementing agencies, under the supervision of the project management unit and the coordination committee. The project followed both bank and national procurement procedures. IEG interviews indicated that national procurement procedures are notoriously cumbersome and lengthy and the project management unit and the implementation agencies lacked experience with Bank procurement procedures. Procurement was complicated by the technical nature of many of the components, such as laboratory upgrading, which also taxed the Bank team and created a need for hiring multiple technical specialists to draft terms of reference. Two years after Board approval, only \$3.3 million of the loan had been disbursed or 45 percent of the appraisal estimate for that date. Once aware of the procurement capacity constraints, the Bank team stepped in to assist with drafting terms of reference for consultancies and technical equipment procurement, but this remained a time-consuming process.

3.7 ***There were inherent coordination challenges associated with managing a large and complex project, and the PMU was handicapped in meeting these demands by a lack of coordination authority and insufficient staffing.*** The project was complex, comprising five components and multiple subcomponents that were implemented by twelve different agencies. An argument at appraisal for supporting the envisaged activities through a single project with several components rather than through multiple more focused projects was that this would allow for greater cohesion. It was thought that a single project would be easier to supervise and control, allow for greater operational synergies and avoid fragmentation. In practice, this did not prove to be the case. The project management unit was located within one of the Ministry of Agriculture Directorates which is at the same hierarchical level as the other executing agencies. IEG interviews and project supervision documents indicate that it did not have sufficient authority over the other agencies to play a proactive role in coordination. As a result all major issues had to be brought to the attention of the interdepartmental coordinating committee chaired by the Minister of Agriculture for resolution. This was a time-consuming process. IEG interviews indicated that each implementation agency implemented its own program, largely in isolation of the other units, as if they were separate projects. Supervision reports also indicate fragmentation and lack of coordination between components. The project management unit had only two people and had no specialists in procurement or monitoring and evaluation, to assist the executing agencies. Ultimately it could not play a proactive role in coordination, procurement, or monitoring and evaluation.

3.8 ***Producer organizations targeted by the project were not viewed as legitimate by producers.*** Producer organizations were a key part of Government policy and were to be supported as an essential part of the project. During implementation it came to light that producer organization leadership was viewed as an arm of government. There was little ownership from the greater membership base, who in turn had limited interest in

participating in project activities aimed at strengthening producer organizations. Without addressing these issues at the outset, building the capacity of producer organizations was less effective than it otherwise might have been.

3.9 *Hiring restrictions imposed by the Ministry of Finance as part of broader civil service reforms also adversely affected project implementation.* The Ministry of Agriculture was unable to recruit or redeploy some specialized staff it needed in a timely manner and this resulted in significant implementation delays, in particular with respect to the pilot activities.

Implementation of Monitoring and Evaluation

3.10 Implementation of monitoring and evaluation was weak. The eight original outcome/impact indicators specified at appraisal were not monitored. Supervision reports indicate that the project team found that these indicators “could not be aggregated to provide an overall picture of how the project was progressing.” Attempts were made to improve deficiencies in monitoring and evaluation design but these measures came too late in project implementation to allow for mid-course corrections and ultimately were not effective in measuring project effectiveness. Output indicators were reviewed and revised at the project launch workshop and the Bank recommended a five-day monitoring and evaluation workshop with support of both national and international experts. The workshop was never held and a monitoring and evaluation specialist was never hired for the project management unit. Supervision documents made reference to the fact that there was no monitoring and evaluation system in place and a specialist with monitoring and evaluation expertise was brought in during the midterm review in 2005 to recommend improvements but a new M&E framework was not introduced until 2007 a year before project closing. The new framework included a list of 29 qualitative institutional indicators and over 100 quantitative indicators but they were largely output indicators that show the extent to which agreed upon activities were carried out but do not measure outcome level achievements. In addition, project pilot activities were not evaluated until loan closing, too late to make corrections. Also the pilot activities were not evaluated for learning and/or possible scale-up. In summary, the monitoring and evaluation system was of limited use in tracking progress, making decisions for corrections or evaluating project achievements at project closure.

Safeguards Compliance and Fiduciary Issues

Safeguards

3.11 The project was classified as Category B under the Bank’s environmental and social safeguards framework. An environmental impact study was carried out during preparation, concluding that the project would positively contribute to environmental sustainability and public health. Supervision documents indicate that the Bank’s safeguard policies were fully complied with during implementation. Diagnostic and research laboratories were reportedly constructed according to environmental regulations and individual environmental assessments addressed the risks and the proper handling of laboratory waste. No pesticides were procured under the project. The project supported

and encouraged integrated pest management and the use of biological control methods, and helped improve consumer food safety.

Financial Management and Procurement

3.12 Project documents reveal only minor weaknesses in reporting on contracts. Due to the absence of automatic transmission of contract awards to the project management unit by the implementing agencies, implementing agencies took longer than they should have to report the contracts they had approved or cancelled. Audits were conducted annually, and were unqualified. No cases of misprocurement occurred but, as stated earlier in paragraph 3.6, the inexperience of implementing agencies in World Bank procurement rules coupled with Tunisia's own lengthy procurement procedures created implementation delays throughout the life of the project.

4. Achievement of the Objectives

Objective 1 Strengthen agriculture producers' organizations and services

4.1 This objective was pursued through a pilot operation to enhance the management capacity of existing producer organizations. The pilot targeted two types of formally recognized producer organizations: Cooperatives for the delivery of agricultural services (cooperatives) and Agricultural Development Groups (GDAs).⁵ According to the project design document, the project was to strengthen producer organizations to facilitate access to the services and markets they need.

4.2 **Outputs.** Private firms were contracted to provide technical assistance with accounting and financial controls, financial diagnostics, general management advice and strategic investment planning to a total of 72 producer organizations, just short of the target of reaching 76 organizations. The technical assistance entailed drawing up a list of each organization's weaknesses, preparation of an institutional development plan, training of elected leaders and hired managers, and advice on implementation of the development plans. However, by project closure few of the development plans had been carried out. The pilot did not offer a wider array of services useful to farmers or address the question of how to expand cooperatives for additional products.

4.3 **Outcomes.** There is little evidence that the pilot strengthened agricultural producers' organizations and services. Progress of the pilot was not monitored during implementation and an evaluation was only carried out at the end of the project. Supervision reports indicate that many of the participating cooperatives were not financially viable and they were not adequately staffed to be able to benefit from the technical assistance provided. There was insufficient information to assess the benefits of

⁵ Cooperatives were initially set up as government institutions to collect milk and provide services to livestock owners. They have since diversified into agricultural input supply and some crop marketing. Agricultural Development Groups are nonprofit associations of farmers whose objective is to manage collectively the natural resources of a clearly identified zone and to contribute to the area's development.

training provided to the few cooperatives that were financially viable and had staff in place to train.

4.4 Project files and IEG interviews also point to several factors that call into question the relevance of the technical assistance provided. The cooperatives and GDAs suffered from core structural problems that the technical assistance activities did not address. These included governance issues, such as their lack of relative autonomy from the government, respect for democratic elections, and government interference in their internal affairs, that call into question the legitimacy of farmer owned organizations. Implementation supervision missions found that farmers widely perceive these organizations as a layer of the administration rather than representing farmers. As a result there was limited buy in or ownership of the membership base. In some cases the cooperatives were found to have fictitious memberships. Cooperatives also suffered from lack of access to credit. Supervision reports prepared at the end of the project acknowledged that although most of the activities to support producer organizations were carried out as planned, these activities should have been preceded by a restructuring of the cooperatives and associations.

4.5 The access of GDAs to markets was also dealt a setback during implementation. At appraisal, legislation governing GDAs allowed them to engage in commercial activities such as selling their member's products. In 2004 the law was changed prohibiting them from engaging in commercial activities.

4.6 *Overall achievement* of the objective is rated *negligible*.

Objective 2 Support the growth of high quality, high value added agriculture

4.7 The strategy of the operation for achieving this objective involved improving the quality of agricultural services delivered by public and private institutions and improving the flow of information for stakeholders.

IMPROVING THE QUALITY OF AGRICULTURAL SERVICES

4.8 The services targeted under this objective were enhancing quality in commodity chains, agriculture research, extension services, plant and seed protection and certification, and livestock and animal health services. According to the project appraisal document (pg. 41) the activities targeted to each of these services would "support efficient and accountable public, cooperative and private services that deliver relevant and cost effective producer services focused on increasing quality, value added and market access."

Quality in Commodity Chains

4.9 *Outputs.* Enhancing the quality of agricultural commodity chains was pursued through the establishment of a network of quality specialists within the Agriculture Investment Promotion Agency, the government agency charged with promoting private sector investment in the agriculture sector, to work with national level agricultural Inter-

professional Groups.⁶ Work carried out through this network was intended to enhance product quality, improve the brand image of Tunisian agriculture products, and facilitate access to markets.

4.10 The Agriculture Promotion agency hired 15 quality experts who worked with quality cells created in each inter-professional organization to enhance the quality and value added of the products in their sector. A coordination committee was also established to facilitate the exchange of information between the Inter-professional Groups on a monthly basis. Quality strategies were prepared with each inter-professional group and websites were created to support their work in promoting their respective sectors.

4.11 Product-specific training programs on quality and agricultural marketing were held in Tunisia and Europe for the quality experts and technicians on food safety systems. Mobile laboratory equipment was provided to several Inter-professional Groups to assist with quality control. For example, three mobile labs were procured for the Inter-professional Group for milk allowing for on-site analysis of milk quality at milk collection centers. Immediate feedback is provided to the farmer and milk collection agent on the concentration of the milk collected as well as phytosanitary characteristics. The IEG mission confirmed that the mobile laboratories are still in use at milk collection centers.

4.12 Twenty-three commodity-specific quality studies were prepared that evaluated value chains and provided recommendations for improving product quality, value added and market access for exports and high value commodities. The number of quality studies far exceeded the four that were originally planned. Best practice guides were also developed that explain quality specifications and procedures to farmers and post harvest processors.

4.13 To develop a positive brand image for Tunisian agricultural products and enhance export capacity through greater traceability, the project supported the creation of quality labels and designations of origin seals and product certification. The AOC-IP Commission⁷ approved 11 seals that certify the geographic origin of wine, dates, apples and grenadines from specific regions of Tunisia. By project closure the groundwork was also laid to create a label for Tunisian organic production, which was approved after

⁶ Inter-professional Groups facilitate coordination between producers, processors and traders and participate in export promotion. They are managed by a General Director, who is appointed by the Ministry of Agriculture, and they are financed through a portion of taxes collected on agricultural products sold on wholesale markets. There are five Inter-professional Groups in Tunisia covering the following areas: milk, fish production, animal production, fruit production and vegetable production.

⁷ This is the agency in charge of the French Appellation of Controlled Origin (AOC) certification system, which defines products that meets specified geographical origin and quality standards. To be recognized by AOC a product must come from an AOC delineated geographic area where the raw materials are produced and transformed; have well defined production conditions; and have a well established reputation. The AOC provides a guarantee of quality to consumers but also guarantees restricted competition and potentially high prices for producers.

project closure in April 2010. GlobalGap⁸ certification was obtained for exports of 12,000 metric tons of potatoes, 3,000 metric tons of geothermic tomatoes and 700 metric tons of artichokes.

4.14 ***Intermediate Outcomes.*** The project can be credited with improving the capacity of the Agriculture Promotion Agency and the Inter-professional Groups to work on quality issues. Interviewees unanimously attributed the project with generating a clearer understanding of what a quality product means and concrete steps that can be taken to improve it. Prior to the project neither the Agriculture Promotion Agency nor the Inter-professional Groups addressed product quality issues. Their focus was on increasing raw production of agricultural commodities and the Agriculture Promotion Agency promoted investment in the sector largely through fiscal or tax incentives. A quality focus is now mainstreamed into the agencies' work. All of the quality specialists hired by the project have been retained as permanent agency staff. The Agriculture Promotion Agency continues to conduct seminars on quality enhancement for relevant stakeholders. Quality standards and norms for agricultural commodities now exist that Tunisia previously did not have. Interviews suggest that the Inter-professional Groups, private processors, and exporters have a greater understanding of what the market demands. Product differentiation and market segmentation are now practiced for some products as a result of project activities. Tomatoes are now sorted according to quality at wholesale markets and some agricultural development groups have started to implement an approach to differentiate red meat suitable for sale to butchers from that destined for supermarkets. The IEG mission attended an agricultural investment forum organized by the Agriculture Promotion Agency and witnessed the prominent use of quality seals in promotion of products and investment opportunities. AOC and quality labels were also seen on Tunisian products sold in supermarkets.

4.15 However, more work is needed to ensure that the quality enhancement achievements of the project are utilized by value chain actors. There are no data to systematically demonstrate the impact of the projects achievements in this area on actual product quality, access to markets, or brand recognition. The Inter-professional Groups interviewed by IEG unanimously expressed appreciation for quality studies produced by the project but it is unclear to what extent recommendations are being implemented. One Inter-professional Group noted that only one recommendation from the quality study of its sector has been implemented. It is not clear if this is due to lack of financing to implement the other recommendations or a perceived lack of relevance.

Agricultural research

4.16 ***Outputs.*** The project aimed to enhance the relevance of agricultural research services through greater decentralization of administrative and budgeting authority and

⁸ GlobalGap is an internationally recognized set of farm standards dedicated to Good Agricultural Practices. Through certification, producers demonstrate their adherence to GlobalGap standards. GlobalGap is becoming a compulsory standard required by many retailers, particularly in Europe, Tunisia's largest trade partner for agriculture products. For consumers and retailers, the GlobalGap certificate is reassurance that food reaches accepted levels of safety and quality, and has been produced sustainably, respecting the health, safety and welfare of workers, the environment, and in consideration of animal welfare issues.

regionalization of the system. It was thought that this would move research closer to the farmer and better reflect the region specific needs in research and improve the feedback loop between researchers and users.

4.17 Two regional research centers were created and six existing research stations were upgraded. Regional research centers and stations were given greater autonomy and greater budget authority to reduce bureaucratic delays in daily implementation. The procedure for processing research tenders was also revised to increase efficiency. Whereas previously research tenders passed through the Ministry of Agriculture before being posted, they are now posted directly online and approval rests with the Institute for Agricultural Research and Higher Education. Interviewees reported anecdotally that this has increased the speed at which tenders are processed.

4.18 The processes of planning, approving and evaluating research were revised to allow for greater input of users and to make it more applied. In the past research was approached as an academic exercise and proposed topics for research was based largely on the researchers' agenda. Now research is only conducted on topics demanded by agricultural development actors. Contractual arrangements were created between the Agricultural Research Institute and the regional agriculture development centers and other government agencies that implement agriculture and rural development programs. These agencies are now able to propose topics for research and participate in field activities along with the researchers and share costs. Carrying out research with multidisciplinary teams has been introduced to experimental stations and demonstration plots. Five ad-hoc commissions to monitor and evaluate research and development programs have been established. The commissions meet annually and include representatives of the each of the Inter-professional Groups, which also provides a forum for the groups to express their research needs. During the project, 15 research studies were implemented at the request of the Inter-professional Groups. The mission confirmed that the committees are still active. The annual meeting where researchers brief the research institute and Inter-professional Groups on status and preliminary findings of research projects took place during the mission.

4.19 Improvements in the availability of scientific information to stakeholders were also made. A database of agricultural research was created comprising results of past research projects, updated with results of ongoing projects. A short summary file with results of each project created and posted on the Ministry of Agriculture's website is also shared with Inter-professional Group members. Posting of summaries of research results is now standard procedure for all research projects. Information on new crop varieties and agricultural techniques is also shared with some farmers through agricultural information days organized by the regional agriculture development centers and through farm trials that are part of some research projects.

4.20 ***Intermediate Outcomes.*** The outcome level results of these activities were not monitored by the project. The IEG mission was able to confirm that regional research stations continue to operate, as do the research commissions, which held their annual meetings during the IEG assessment mission. A greater number of stakeholders in the sector now have input into the research agenda than was previously the case. Interviews with Inter-professional Groups indicate that they value participation in the commission

for the opportunity that is provides for providing input into the direction of research and that they find the research results communicated to them is relevant. However, the direct link between agricultural research and farmers remains weak. As noted above, research results are communicated to the farmers who attend agricultural information days at the regional agriculture development centers, but interviewees acknowledged that there is no mechanism to directly hear farmers' views of their research needs because they are not organized.

Extension services

4.21 The project aimed to strengthen the provision of extension services by improving the quality of training for extension agents, strengthening traditional public extension methods towards women farmers, launching a communication campaign to encourage better use of agricultural research, as well as testing new approaches to private extension (discussed below in paragraphs 4.44 -4.46 and 4.50).

4.22 ***Outputs.*** To strengthen traditional public extension methods for women farmers, the project provided support for 34 new women extension agents working through the regional agriculture development centers in 10 governorates. 170 training days conducted with rural women focused on income-generating activities for women. The project completion report claims that this activity worked well but there was no evaluation of this activity upon completion to substantiate this claim or demonstrate impacts. IEG interviews indicate that the agriculture extension agency continues to provide extension services for women in all 10 governorates and a study was conducted following project closure to determine how to expand extension services for women to the whole country but the extension agency currently lacks the necessary financial and human resources to implement it.

4.23 Continuous training for public sector extension agents was supported by putting in place a system to identify training needs and by developing training courses that can lead to obtaining a degree. Interviews indicate that 7 new agriculture engineering courses have been introduced to the continuous training curriculum since project closure. A mass media communication strategy was also developed to encourage better use of research results, but no monitoring and evaluation was done to demonstrate the impact of these activities.

4.24 ***Intermediate Outcomes***

Plant and seed protection and certification

4.25 ***Outputs.*** The project aimed to improve the capacity to monitor and test the quality of pesticide and seed farm inputs; develop monitoring and surveillance on internal trade and on imports and exports; and enhance awareness of technical staff, extension staff, and producers of cost effective and sustainable pest control and integrated pest management. Most of the activities planned for the plant protection program were carried out as planned. The project upgraded the equipment and physically expanded central labs in Tunis responsible for control of inputs (pesticides, seeds, fertilizer) and analysis of residues and contaminants in agriculture products. A new phytosanitary station was

installed at the main container port in Tunis and three regional plant control stations were also upgraded with equipment. In conjunction with the laboratory upgrades, staff received training and a quality management system in keeping with international best practices was put in place. The IEG mission confirmed the labs in Tunis are in operating in good condition and most of the equipment procured by the project is in use.

4.26 The project also introduced an epidemiology system for controlling pests in various horticulture crops, and it trained experts in integrated pest management. Recommendations of an integrated pest management workshop organized by the project led to establishing a national committee for integrated pest management and sub committees for citrus, wine, potatoes, dates, cereals, and fruit trees. But there are no data to assess the extent to which this knowledge is being applied or its effectiveness.

4.27 A number of activities were not implemented or were not completed. Equipment procured by the project to detect genetically modified organisms was not in use by the time of the IEG assessment mission owing to a lack of legislation on the screening of genetically modified organisms. A seed unit was planned for the regional labs but was not established because of human resources constraints. Plans to create a fertilizer unit were cancelled and an information system to help decision makers coordinate lab work was not put in place due to procurement delays. The project also was not able to obtain European Union accreditation for the labs. This goal was added following the project's mid-term review, one of several recommendation made by the European Union to enhance Tunisia's access to European markets. The process to obtain accreditation was initiated under the project through a twinning arrangement with the European Union. Nonetheless, obtaining accreditation is a long and stringent process that requires appropriate equipment, training, procedures, and staffing, as well as adequate financial autonomy of the laboratories, and this process was not complete by project closure or at the time of the assessment mission. IEG interviewees noted that a key hurdle has been meeting the accreditation requirement that a certified accountant manage purchasing. The accountant on staff left during the project and has not been replaced due to hiring restrictions imposed by the Ministry.

4.28 ***Intermediate Outcomes.*** The project's laboratory upgrade activities have enhanced Tunisia's plant protection capacity in several ways. Laboratory upgrading has expanded the types of analysis that can be performed, new tests are possible that provide more precise results and the risk of contamination in the labs has been reduced as a result of civil works and new work procedures. Lab staff reported anecdotally that new quality management procedures separating staff testing pesticide inputs from those testing for pesticide residue have lead to a reduction in risk of contamination. Pesticide analysis capabilities have also expanded. Prior to the project the laboratory only had the ability to test for 12 types of residue, the new equipment allows for analysis to 200 types. Equipment provided has allowed for new types of analysis that provide more precise results. The plant analysis unit for exports has enabled quick analysis at port which reportedly speeds up the export process. Improvements in quality procedures allowed them acquire International Seed Testing Association⁹ certification of the seed lab in

⁹ The International Seed Testing Association develops procedures for sampling and testing seeds, and promotes uniform application of these procedures for evaluation of seeds moving in international trade.

2008.¹⁰ Improvements to quality tests for cereals allowed Tunisia to meet standards of the OECD cereal certification scheme¹¹ and their labs are now authorized to issue the certification logo. Unfortunately, there are no data or studies to substantiate the scale of improvement in these services.

Livestock and animal health

4.29 ***Outputs.*** The following activities were supported to improve veterinary control systems, epidemiology monitoring, and sanitary controls for livestock products: establishment of a national identification system for cattle and monitoring animal movements; introducing sanitary controls for milk collection; enhancing the provision of artificial insemination; improving the diagnostic capacity in animal health, feed quality control, and the safety of animal and fish products through laboratory upgrades; and encouraging the use of private veterinary services (discussed below under paragraphs 4.47, 4.48 and 4.51).

4.30 ***Cattle identification.*** A national identification program for dairy cattle was established by the Livestock and Rangelands Development Agency. The project trained 313 agents to help with animal identification and the system became operational in 2003. By project closure 80 percent of cows were identified with ear tags and registered by project closure. At the time of the assessment mission, 100 percent of pure breed cattle had been identified and registered in the livestock agency database and approximately 40 percent of local mixed breeds were registered. However, the project's plan to link the national cattle identification database to the Veterinary Services data base was not realized, reducing the value of the system for rapid quarantining of herds to prevent the spread of infectious disease. The project also intended to establish a traceability system for red meat, but this was not possible because over half of animals are slaughtered outside of official slaughterhouses.

4.31 ***Milk collection.*** The project introduced sanitary control measures for milk collection and supported the privatization of artificial insemination services. Training was provided for 247 milk system controllers and support was provided to upgrade sanitary controls at milk collection centers receiving government subsidies. Rules on testing and sanitary conditions of milk collection centers were in place by project closure but IEG was unable to substantiate the extent to which the rules are enforced. Training of milk control experts and inseminators (discussed below in paragraph 4.48) was expected to enhance the competitiveness of agriculture and enhance the government's dairy promotion and control programs. But these impacts were not measured.

4.32 ***Laboratory upgrade.*** The project also provided support to upgrade laboratories at the Veterinary Research Institute. The Institute's laboratories in Tunis were upgraded and

¹⁰ Interviews indicate that International Seed Testing Association status strengthens Tunisia's regulatory enforcement capacity. It is difficult for importers whose products are rejected to contest the decision of an ISTA grade laboratory.

¹¹ OECD Schemes for the varietal certification encourage the use of seed of consistently high quality in participating countries.

a new microbiology lab was constructed in Sfax, one of the main fishing centers in Tunisia. Equipment was also provided to regional laboratories to expand their ability to process samples. The IEG mission visited the labs in Tunis and found most of the project procured equipment in good working order.¹² However, European Union accreditation for the Institute's laboratories was not obtained. The key impediment was reported to be the lack of budget to meet the European Union requirement for annual training of staff. Establishment of a biosafety level 3 laboratory for the diagnosis of avian flu and other severely infectious diseases was also not completed due to the lack of trained personnel and legislative autonomy, and infrastructure constraints of the facility that prevented physical renovation required to bring it up to level 3 standards.

4.33 ***Intermediate Outcomes.*** There are no systematic data to demonstrate the effect of the project's livestock activities on either animal health or the quality of livestock products. However, anecdotal evidence suggests that the animal health diagnostic capacity of Ministry of Agriculture has been enhanced by the project's support for the animal identification network, improvements in communication of urgent problems and the expanded laboratory analytical capability. The Veterinary Research Institute staff reported to IEG that the equipment procured for their laboratories enhanced their diagnostic capacity through the use of new techniques for viral detection. The equipment upgrade has also made possible quantified analysis of histamines in fish, which is reported to be more accurate than the semi quantitative analysis of histamines previously employed. The biotoxin laboratory supported by the project has enhanced the capacity to export mollusks. It is the only laboratory in the country equipped to conduct biotoxin analysis and these products cannot be exported without such analysis.

IMPROVE THE FLOW OF INFORMATION FOR ALL SECTOR STAKEHOLDERS

4.34 ***Outputs.*** This was pursued by strengthening agricultural statistics; upgrading the annual crop forecasting system and developing a fish harvesting forecast; and strengthening the agricultural information system of the National Agriculture Observatory, the agency charged with dissemination of information across the Ministry. The aim of these activities was to maximize the coverage, reliability and availability of statistics and information for stakeholders who make choices affecting the agricultural sector.

4.35 ***Data collection and analysis.*** The project supported the collection of new data and made improvements to existing data collection efforts. The first official fishing census was conducted under the project, which included an inventory of fishing boats, information on fishing cooperatives, and aquaculture farms. A farm structure survey was also completed, which updated and improved upon information collected by prior surveys. The number of farms covered by the survey expanded from 40,000 to 50,000. The information gathered was also expanded. Earlier surveys focused only on the main crops and soil types under cultivation. Whereas the new survey recorded all crops under

¹² There were a few exception of equipment that were damaged at receipt. In compliance with Tunisian procurement rules equipment was obtained from the lowest possible cost, in some cases a no return policy was part of the terms of the contract. It is not clear to what extent this was a problem. There was also an isolated case of equipment that was no longer in use because the analysis it is used for is now obsolete.

cultivation, the size of farming exploitation, and whether farms were utilized year round or only part of the year.

4.36 Monitoring of cereal harvests was improved through the preparation of a procedures manual, standardization of the forms used by the regional agriculture centers to record data collected during cereal harvesting campaigns, and installation of software that allows for harvest collection information to be updated in real time. Interviewees indicated that this is an improvement over past practices when each regional agriculture center used its own form to record harvest collection data and information was transmitted by fax or conventional mail and could take up to a week for the Director General of Agriculture Production to receive the information. The project supported training, recruitment of new staff and procurement of vehicles and equipment to enhance data collection and statistical analysis capacity in the Ministry and the regional agriculture development centers. Fifty engineers were recruited to conduct surveys during the project and all have been hired as permanent staff within the Ministry. The project provided training in data collection and statistical analysis in all 24 regional agriculture development centers but IEG interviews indicate that some centers no longer have trained staff as a result of retirement and some movement of staff. Two vehicles were procured to assist with data collection and the statistics office now has a dedicated technician to assist the regional centers with their data collection and analysis needs. Data entry and statistical analysis software were also upgraded. The project trained staff at the Directorate of Agriculture Statistics in the use of SPSS and CSPRO. Staff reported anecdotally that the use of the new software has reduced the time to enter data, increased accuracy, and made it easier to correct mistakes.

4.37 **Dissemination.** The project worked with the National Agriculture Observatory, the agency charged with dissemination of information across the Ministry, to improve its website. Interviewees reported that the website is easier to access and is more user friendly. Interviewees also credit the project with the Ministry's decision to share more information with the public. The farm structure survey, fishing survey agriculture statistics book are all publically disclosed on the Observatory's website. Information gathered by the project as a whole, however, could have been better disseminated. For example, the 23 commodity specific quality studies carried out by the Agriculture Promotion Agency-Inter-professional Groups quality network are available by request but, contrary to expectations, the full studies have not been posted on the Agriculture Promotion Agency website which would have provided valuable information for foreign or domestic investors considering opportunities in the agriculture sector.

4.38 **Intermediate Outcomes.** The project improved the stock of information available to decision makers through its support of several data collection efforts, and enhanced data analysis capacity through improvements in survey methodology and upgrades to statistical and data base software. The flow of information within the Ministry was improved and more information is now available to the public than was previously the case. However, there is little evidence of the extent to which policy makers and farmers are using this information for decision making, which is the real test of its relevance and effectiveness. The project's completion report acknowledges that the information flow could have reached more stakeholders, particularly private entrepreneurs who could benefit from detailed information on commodities and could provide feedback on

analysis and proposals. Finally the flow of information directly to and from farmers remains weak.

SUMMARY OF ACHIEVEMENTS AND OVERALL OUTCOMES FOR THE OBJECTIVE

4.39 In summary, the project improved key stakeholder's understanding of the demands of the international market and identified concrete steps to enhance the quality and competitiveness of many agricultural commodities. Several products have specific quality seals that are backed up by a regulatory authority. Laboratory upgrades have enhanced Tunisia's capacity to meet international standards for the export of agricultural products, control the quality of some agriculture inputs (fertilizer, seeds, and pesticides), and improve animal health diagnostic capacity. But European Union accreditation for laboratories has not been obtained. Agricultural research is now better documented and a broader number of stakeholders provide input to the research agenda. Improvements were also made in the coverage of livestock vaccinations and in animal identification. However, there are little data available to substantiate the extent to which project achievements have led to the ultimate goal of providing higher quality agricultural services that respond to farmers' perceived needs and are cost effective.

4.40 The likelihood that the objective of improving production quality and value-added by improving the competitiveness and market access, particularly for smaller and medium scale producers, will be achieved is modest. As a first phase to the reform program, the project focused on supply side issues related to modernizing agricultural services but achieving the program objective also requires attention to demand side issues. The project appraisal document indicated that the main focus would shift to demand side issues under a possible second phase project but this did not materialize. Moreover, the literature points to a number of constraints in the Tunisian agriculture sector that undermine the incentive that producers have to take on the higher production costs associated with higher quality production. These include agriculture and marketing policies that control wholesale prices of some products and restrict retail margins, limited access to agricultural credit, the fragmented nature and small size of farm plots, lack of drought mitigation measures, and an aging farm population (World Bank 2006, 2012; African Development Bank 2012).

4.41 Overall achievement of the objective is *rated modest*.

Objective 3 Support the growth of sustainable agriculture

4.42 The project appraisal document defines sustainable agriculture in terms of a "sustainable approach: sustainability of service provision requires improving the cost effectiveness of services and getting much more producer and private sector participation, responsibility and cost sharing, including the transfer of some services" (PAD, pg5).

4.43 The activities supported in pursuit of this objective were: (a) encourage a network of private agricultural advisers for delivery of agricultural extension services, (b) promote cost sharing leading to cost recover over time for selected livestock serves (animal identification, diagnosis), outsource some services to the private sector (disease monitoring, inspection, vaccination) and complete privatization of artificial insemination

services, and (c) introduce cost sharing of selected public services in plant protection and seed certification.

Outputs

4.44 ***Extension Services.*** The project conducted two pilots to promote private extension. Under the first pilot a public-private partnership was established through a contract between Inter-professional Groups for Fruits and the Agricultural Extension and Training Agency to provide advice to farmers using private contract extension agents. It was thought that the pilot would stimulate demand for private extension services by demonstrating the value of private extension advice to farmers. Supervision documents indicate that the pilot was implemented as planned but that inter-professional group did not renew the contract at project closure because their members were not willing to pay for the extension advice. A formal evaluation that could have distilled further lessons from the public private partnership pilot was not carried out.

4.45 The second pilot aimed to prepare young agricultural engineers to become private extension counselors. Private advisors were contracted by the Vocational Agricultural Training Center to prepare public servants to enter the private sector. The private trainers and extension agents worked in teams during the pilot to deliver services to farmers. An evaluation of this pilot concluded that the experience was useful in that it provided young university trained agriculturalists with experience working as private extension agents, built good relationships between the extension agents and the farmers they worked for, and carried out certain innovative extension techniques. But the pilot did not sufficiently prepare participants for life in the private sector. As government staff, participants continued to receive monthly salaries under the project which did not provide an incentive to move out to the private sector. IEG interviews indicate that training focused largely on agricultural production aspects and did not cover business management or entrepreneurial skills that the agents would need to establish their own practice. IEG interviews also indicate that the few participants who chose to leave the public sector found it difficult to find employment due to the lack of demand for private extension services.

4.46 It is not clear if the preparation of the pilots included an assessment of farmers' willingness to pay. Interviewees noted that demand for private extension is constrained by a lack of culture of paying for agricultural services and the fact that 85 percent of Tunisian farmers are small farmers, with less than 5 hectares who cannot afford to pay for extension advisory services. Nor is it clear if an assessment had been carried out to understand farmers' demand for extension services. The evaluation of the pilot also noted that farmers were not happy with the advice provided and may not have been well matched to farmers' perceived needs. The experience with extension services in other countries demonstrates that small farmers are willing to pay for extension advice when it meets their production and marketing needs (Beynon 1996, Nyambo et al. 2009).

4.47 ***Livestock services.*** The project supported a shift to the use of private veterinarians to carry out government subsidized vaccination campaigns. The cost of vaccines is covered in full under the Government budget but private veterinarians are authorized to carry out vaccinations rather than government technicians. The Animal Health services

sanitary mandate¹³ was expanded to prevent several highly infectious cattle and sheep diseases and the project facilitated the establishment of national rules that set prices paid to vets for carrying out specific actions, a regional committee was set up to issue licenses which are renewed on an annual basis. Animal services reported to IEG that the number of private veterinarians authorized to carry out vaccines has increased steadily since the start of the project pilot and has continued to increase following project closure.¹⁴ Private sector veterinarians now carry out subsidized vaccinations for foot and mouth disease, blue tongue and sheep pox in 15 of 24 governorates.

4.48 Training was also provided to 213 private technicians in the provision of artificial insemination. Previously training was only provided to government staff. Interviewees indicated that 90 percent of cattle insemination is now carried out by private technicians. The project also aimed to change the status of the Veterinary Research Institute from a public agency to non-administrative public institution, which would allow them to retain and manage laboratory fees on a full cost recovery basis but this goal was not realized due to opposition within the Ministry.

4.49 ***Plant protection and seed certification.*** Project activities related to upgrading the plant protection and seed certification laboratories facilitated passage of a law allowing for labs to establish and collect user fees for certain quality analysis carried out. The rationale was that this would contribute to the financial sustainability of the lab network and reduce dependence on the government budget.

Outcomes

4.50 ***Extension Services.*** The project's implementation completion and results report concludes that the private extension advisory services pilots were poorly designed and executed and had little impact. Both pilots experienced difficulties in finding government employees willing to participate and were carried out with less than half the staff envisaged at appraisal. The project implementation completion and results report also acknowledges that neither of the two pilots achieved the goal of developing a market for private extension advice and that few of the participating extension agents continued to work as private extension agents beyond the project due to lack of demand for their services. IEG interviews suggest, however, that the pilot did serve as a learning exercise for the agricultural extension agency. The agency now has a better idea of bottlenecks to developing a private extension system, which they continue to work on through new pilot projects funded by other donors.

4.51 ***Livestock services.*** Anecdotal evidence indicates that the shift to vaccination campaigns has increased coverage, and shortened the duration of the campaigns. Staff in

¹³ A sanitary mandate refers to a contractual arrangement whereby the state contracts the private sector to implement certain animal health services which are carried out in the national interest and usually at a cost to the state. They are used in many countries towards the development of the private sector as they can provide an income base enabling the establishment of private practice in areas of extensive animal husbandry systems, which would not normally support such an enterprise.

¹⁴ The use of private veterinarians reportedly increased from 10 veterinarians in 2006, to 15 in 2007, 27 in 2009, 51 in 2009, 130 in 2010 and reached 220 in 2012.

the Animal Health services reported to IEG that prior to the project, the vaccination campaign using government technicians would take on average 6 months, up to a year in some cases. Private veterinarians now comply with completing the campaign in 50 to 60 days. Coverage of vaccination campaigns previously averaged 60% in a given area. Since the introduction of private veterinarians, coverage has reached 100%. Animal Health Services staff also noted they have noticed a drop in the incidence of sheep pox and blue tongue outbreaks. In the case of blue tongue, an outbreak has not been detected since the introduction of the sanitary mandate. There is no information to assess the outcomes of the artificial insemination training.

4.52 ***Plant protection and seed certification.*** IEG interviews confirmed that the amount of fees collected has increased since the law permitting the charge of user fees went into effect. However, dependence on the government budget has not been reduced. Due to Tunisia's centralized fiscal policy all fees collected are sent to the central Ministry and only a portion is transferred back.

4.53 In summary, the project had mixed results in terms of increasing the participation of private sector in the provision of agriculture services. Attempts to create a market for private extension were unsuccessful but the project did succeed at transferring some livestock services to the private sector. There is no evidence available to assess the cost effectiveness. Some of the cost recovery efforts envisaged did not materialize and the project did not monitor cost effectiveness of the other agriculture services it supported.

4.54 Overall achievement of the objective is ***rated modest.***

5. Efficiency

5.1 A benefit-cost analysis was not conducted at appraisal or at completion due to the institutional reform nature of project activities. No other calculations were carried out to provide an alternative assessment of project efficiency in the project completion report. This review bases its assessment of the project's efficiency on a review of the assumed economic benefits put forth in the project appraisal document and consideration of implementation efficiency.

5.2 At appraisal the project preparation team conducted a break-even analysis for the project as a whole, which assumed that project benefits would materialize through an increase of agricultural GDP. This analysis concluded that to obtain an overall rate of return of 12 percent, agricultural GDP growth would have to increase by .03 percent per annum compared to the without project scenario. The project team argued that this does not seem to be unrealistic to reach given the importance of agricultural services and strengthening producer and inter-professional organizations to agricultural growth. The project appraisal document also argues that the fiscal impact of the project was expected to be small as investment and recurrent cost of project activities are small compared to the Ministries' total budget. However, the expected benefits were projected over the entire ten-year program, comprising two project phases. Improvements in the cost-effectiveness and quality of agricultural services, and a positive impact of project on

government budget were only expected after the second phase of the program which never materialized.

5.3 The project appraisal document also argues that “(t)he litmus test for economic benefit to producers under the project will be their participation in the program – active group formation, setting the agenda for agricultural services and progressively paying for and providing services.” Given that the activities that made the least progress were precisely those that aimed at enhancing farmer participation (strengthening producer organizations and piloting demand driven extension services), the project fell short on this measure.

5.4 In terms of implementation efficiency, the project’s slow start up and implementation delays due to procurement capacity were primarily responsible for the 18-month extension of the project closing date. Inefficiencies in project implementation also arose due to the lack of sufficient leverage that the project coordination unit had over the other 11 implementing agencies. As a result, major implementation issues were resolved through a time consuming process of review by the inter-departmental coordinating committee. Overall, efficiency is rated as modest.

6. Ratings

Outcome

6.1 The outcome for the project is rated Moderately Unsatisfactory. The relevance of project objectives to the country’s current development priorities and the Bank’s country and sector assistance strategies is substantial, but relevance of design to the objectives is modest. Both the objectives of supporting high quality, high-value added agriculture and of supporting sustainable agriculture were modestly achieved, while the objective of strengthening agriculture producers’ organizations and services was negligible. Efficiency was modest.

Risk to Development Outcome

6.2 The risk to the development outcomes realized under the project is assessed as Significant. Most of the key achievements attained under the project have continued beyond project closure with financing from the Ministry budget. However, there is a risk that maintenance of equipment in the labs is at risk from insufficient budget allocations and some of the project’s gains in meeting international export standards are at risk from the failure to obtain European Union accreditation of laboratories. As of 2015 the European Union will no longer accept analysis from non accredited laboratories as proof of meeting its import standards.

6.3 There has been little progress in resolving issues pending at project closure or moving forward with the reforms initiated under the project. A second phase intended to consolidate the developments initiated under the project was proposed but was not

approved by the Ministry of Planning.¹⁵ Legislation required before some lab equipment can be utilized has still not passed, in the aftermath of revolution many cases have been clogged in the courts and government attention in general has been focused on other issues.

6.4 Finally, underlying incentives and structural issues that constrain the competitiveness of the sector have not been addressed and may dampen the uptake of agricultural services. Price controls remain a deterrent to investing in quality-enhancing production techniques as well as non-price factors such the small and fragmented nature of farms, and limited availability of agricultural credit. In addition, the Government still does not have an effective way to reach producers. Following the 2011 Revolution, the legitimacy of producer organizations has further eroded. In the immediate aftermath the leadership of many Agricultural Development Groups was rejected, in some cases asked to leave their community. At the time of the assessment mission, Ministry Agencies were still wrestling with finding a viable structure to organize producers.

Bank Performance

6.5 *Ensuring quality at entry.* The Bank did well in identifying a project that was of high priority for the government and responded to the emerging needs of the sector. Preparation and appraisal missions were staffed with a good mix of technical specialists and fiduciary aspects were well prepared. But there were a number of shortcomings in quality at entry that impacted negatively on project implementation. There are discrepancies between the objectives presented in the project appraisal document and the loan agreement and weaknesses in the results chain. Project design was complex with 12 agencies involved and risk identification and proposed mitigation measures were inadequate. Some important risks such as the implementing agencies' procurement capacity constraints were overlooked. Faulty assumptions were also made about the best way to reach out to farmers and the pace that representative producer organizations would develop. The project preparation team assumed that cooperatives would be the best way to reach farmers and did not conduct a structural assessment of producer organizations or an assessment of their business needs before finalizing design of that component. A thorough analysis of enabling environment factors that work against farmers incentives to assume higher production costs associated with higher quality production was not carried out. Finally, there were shortcoming in the design of M&E. Accordingly, the Bank's performance in ensuring quality at entry is rated *moderately unsatisfactory*.

¹⁵ The government opted for a two phase program, with a break point between the two to assess progress and make corrections as needed. The Ministry of Agriculture submitted a request for a second phase of the project but the request was not approved by the Ministry of Planning and International Cooperation. IEG interviews indicate that a sufficient justification the costs of the project, which is apparently standard procedure for all development projects, was not done. Changes in priorities in the aftermath of the revolution may have also played a role. Interviewees indicated that while the agriculture sector remains a government priority, given the scope of needs following the revolution other issues have become higher priority. Interviews suggest that additional factors that may have prevented a second phase approval are that it was perceived as a difficult project that took a lot of time to implement, and addressed soft investments such as research, extension, institutional restructuring, human resources capacities, whereas the government prefers hard investments such as infrastructure.

6.6 **Quality of Supervision.** A constant flow of communication was maintained between the Bank and the Borrower throughout project implementation. Supervision missions were carried out at regular six-month intervals. The Bank team was proactive in ensuring that supervision missions were staffed by sufficient expertise, accessing financial support of two trust funds to cover costs that exceeded the Bank supervision budget. Each supervision mission had up to 11 experts, though follow up on social aspects was lacking due to the absence of social development specialists among the supervision team.¹⁶ During the mid-term review, the Bank showed flexibility in adjusting to changes in government priorities: the dated covenant related to the creation of the Unified Research Institute was dropped and budgets were expanded for new laboratories and additional equipment to respond to stricter European Union import requirements. The Bank also agreed to extend the loan closing date to accommodate the procurement of these labs and equipment. The Bank team played a proactive role in assisting with drafting terms of reference and identifying potential international service providers, once it became apparent that the different implementation units were ill equipped to handle complex technical assistance procurement. IEG interviews confirmed the positive role that technical expertise brought in through supervision missions played in drafting terms of reference for consultancies and technical equipment.

6.7 These strengths of supervision are offset by several shortcomings. Greater candor in ratings was warranted early in the project when implementation was delayed. The team focused too much on monitoring physical and institutional aspects and not enough on whether the project's objectives were being met or if the project was having the desired impact on its stated beneficiaries – in particular small and medium scale producers. The Bank supervision team should have given earlier attention to M&E, rather than waiting till the mid-term review. The Bank did not undertake, or request from the Borrower, evaluations of the various pilots under the project and missed opportunities to make important corrections. The mid-term review was not used to clarify the relationship between the objectives and the components and to establish more measurable indicators. The new indicators formulated in 2007 were merely measured inputs and outputs. Also, the farm outreach activities were not adequately supervised. The supervision team should have modified the content of the technical assistance to the agriculture professional groups when a 2004 law restricted their ability to market agricultural products. Finally, the project should have been restructured early on given the disbursement shortfalls and limited progress towards targets. Quality of Supervision is rated *moderately unsatisfactory*.

6.8 Overall Bank Performance is rated *moderately unsatisfactory*.

Borrower Performance

6.9 **Government Performance.** The government demonstrated its commitment to the project and reforms in the agriculture sector through its active engagement in a long identification and preparation process. A letter of sector development policy was also developed parallel to project preparation, which set forth the government's long-term

¹⁶ Project documents indicate the team provided 96 staff weeks of supervision between 2002 and 2008, reaching a high point of 24 weeks in 2004.

vision for the sector and action steps for achieving this vision across the two-phased program. During implementation the government was supportive of most project activities, though it had a change of commitment towards creating a unified research institute. Supervision reports indicate that the government was responsive throughout implementation but slow to adopt certain legal texts for activities that required new laws in order to be implemented and the process of establishing new laws extended beyond the project closing date in some cases. Government performance is brought down, however, by a USD 10.89 million shortfall in counterpart funding. In addition, hiring restrictions imposed by the Ministry of Finance as a part of a major civil service reform program hampered the ability of the Ministry of Agriculture (MOA) to recruit specialized staff, which in turn led to implementation delays. Finally changes to the legislation in 2004 that restricted agricultural development groups from participating in commercial activities were counterproductive to achieving the project objectives. Overall government performance is rated *moderately unsatisfactory*.

6.10 ***Implementing Agency Performance.*** Implementing agency staff showed a high degree of enthusiasm and commitment to implementing the project and their financial management and safeguard implementation performance was satisfactory. Many agencies experienced procurement challenges, due to their inexperience with Bank procurement rules and cumbersome national procurement procedures. But no cases of misprocurement occurred and financial management was sound. The project management unit was insufficiently staffed (one coordinator and one assistant) and did not have staff specialized in procurement or monitoring and evaluation. The project management unit was too low in the ministry hierarchy to help implementing agencies sort out problems. The implementing agency shares responsibility with the Bank for faulty monitoring and evaluation. On balance implementing agency is rated *moderately satisfactory*.

6.11 Overall Borrower Performance is rated *moderately unsatisfactory*.

Monitoring and Evaluation

6.12 ***Design.*** The project appraisal document clearly specifies monitoring and evaluation arrangements and identifies key performance indicators for project objectives, but the indicators lacked quantitative performance targets and no baseline data was established to provide a reference point for measuring project progress. In addition, there were several pilots included in project design but there were no explicit evaluations of the results.

6.13 ***Implementation.*** The original project indicators were not used during implementation. Attempts were made to improve on them but these measures came too late for use in improving implementation and were ineffective at measuring outcomes at project closure. A monitoring and evaluation expert who was to be recruited in the project management unit was never hired. Pilot activities were not evaluated until the end of the project and were not assessed for learning or scaling up potential.

6.14 ***Utilization.*** The M&E system was of limited use in tracking progress, making decisions for corrections, or evaluating project achievements at project closure.

6.15 **M&E Quality Rating:** Negligible

7. Lessons

7.1 The project experience points to the following lessons:

7.2 ***The benefits of a comprehensive project design can be outweighed by complexity, difficulty in implementation, and resources being spread too thin, even in a middle-income country like Tunisia.*** The project was designed to modernize agricultural support services through a single project with several components and 12 implementing agencies rather than through multiple more focused projects because it was thought that a single project would be easier to supervise and control, allow for greater operational synergies and avoid fragmentation. In practice, this did not prove to be the case. The multiple components were fragmented with no real coordination and resources were spread too thin to make a strong impact in any one area.

7.3 ***The effectiveness of complex projects implemented by multiple actors can be undermined unless the project management unit (or its parent agency) has sufficient authority to proactively coordinate key implementation agencies.*** Implementation of this project was carried out by twelve executing agencies. The project management unit was located within one of the Ministry of Agriculture Directorates which is at the same hierarchical level as the other executing agencies and it did not have sufficient leverage over the other agencies to play a proactive role in coordination.

7.4 ***Attempts to move from public to private provision of services can be undermined if there is not sufficient attention to beneficiary, needs, perceptions, and incentives, both for producers and service providers.*** Substitution of public by private extension services can be difficult because farmers are often reluctant to pay for extension services that they may not perceive as relevant to their needs. The services selected for private provision should be identified with this in mind. The project's attempt to move to private provision of crop extension services was hurt by the lack of market demand for the services provided and inadequate assessment of farmers demand and willingness to pay. In contrast, the sanitary mandate, whereby the state contracts the private sector to implement certain animal health services in the national interest, and government subsidies for cattle that are contingent on the cattle being vaccinated guaranteed that there would be sufficient demand for the private veterinarians mobilized to carry out vaccination campaigns.

7.5 ***Monitoring and Evaluation is an important tool for project coordination.*** In complex projects with many components and multiple implementing agencies the presence of sound and measurable monitoring and evaluation indicators is key for gauging whether disparate activities are making collective progress to meeting the projects objectives. Inadequate evaluation of pilots reduces the scope for learning and improving effectiveness. Complex projects such as this one which address multiple issues can be taxing to implement.

7.6 ***Lack of ownership of producer associations by farmers limits their utility in providing farmers with inputs, access to services and inserting their interests into agricultural policy.*** In this case the benefits of association were not realized because the associations lacked buy-in and ownership from the farmers that they were supposed to

represent. There was little active participation of their members who viewed these groups as arms of the government that did not represent their interests.

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Annex A. Basic Data Sheet

AGRICULTURAL SUPPORT SERVICES PROJECT (LOAN NO. 7063IBRD-700630)

Key Project Data (amounts in US\$ million)

	Appraisal estimate	Actual or current estimate	Actual as % of appraisal estimate
Total project costs	42.45.	29.46	69
Government	16.69	5.8	35
Co-financing	4.43	--	0
Loan amount*	21.33	23.66	111
Cancellation	NA	4.80	NA

* The IBRD loan was made in Euros. The total loan amount was Euro 30.90 million, of which Euro 23.95 million was disbursed and Euro 6.95 million was cancelled.

Cumulative Estimated and Actual Disbursements

	<i>FY01</i>	<i>FY02</i>	<i>FY03</i>	<i>FY04</i>	<i>FY05</i>	<i>FY06</i>	<i>FY07</i>	<i>FY08</i>	<i>FY09</i>
Appraisal estimate (US\$M)	0	2.0	5.0	9.0	14.0	18.0	21.3	21.3	21.3
Actual (US\$M)	0	.21	2.14	4.02	7.63	11.34	14.27	18.97	23.66
Actual as % of appraisal	0	10	43	45	54	63	67	89	111

Date of final disbursement: 5/22/2007

Project Dates

	Original	Actual
Concept Review	NA	09/15/2000
Negotiations	04/01/2001	05/14/2001
Board approval	06/26/2001	06/26/2001
Signing	10/02/2001	10/02/2001
Effectiveness	02/02/2002	02/02/2002
Closing date	06/30/2007	12/30/2008

Staff Inputs (staff weeks)

<i>Stage of Project Cycle</i>	<i>Actual/Latest Estimate</i>	
	<i>N° Staff weeks</i>	<i>US\$US\$(‘000)</i>
Lending	79	633.54
Supervision	96	1,287.13
Total	175	1,920.67

Task Team members

<i>Names</i>	<i>Title</i>	<i>Unit</i>	<i>Responsibility/Specialty</i>
Lending			
Christopher Ward	Lead Operations Officer	MNSRE	Team Leader
Marie-Helene Collion	Senior Agricultural Services Specialist	MNSRE	
Marie-Laure Lajaunie	Economist	MNSRE	
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Christian Fauliau	Senior Institutions Specialist	AFTRC	
Tjaart Schillhom van Veen	Senior Livestock Specialist	ECSSD	
Petros Aklilu	Sector Manager	MNSRE	Rural Development
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Hovsep Melkonian	Senior Disbursement Officer		
Hassine Hedda	Disbursement Analyst		
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Doris Koehn	Sector Director	MNSRE	
M-F How Yew Kin	Tunisia Cluster Team Assistant	MNSRE	
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Dominique Bichara	Counsel	LEGOP	Reviewer for Legal Aspects
Sherif Arif	Principal Environmentalist	MNSRE	Reviewer for Environment
Nicole Glineur	Senior Environmentalist	MNSRE	
Stephanie Brackman	Environmentalist	MNSRE	
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Sylvie Tillier	Consultant	MNSSD	Ag. Economics
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Paul Ngoma Kimbatsa	Consultant	MNSSD	Ag. Statistics
Franz Schorosh	Consultant/ICR	MNSSD	Extension
Mohamed Medouar	Sr. Rural Dev. Specialist Country Manager Sr. Fin. Mgmt.	MNSSD	Extension
Siaka Bakayoko	Mgmt.	AFMGN	Financial Management
Moez Makhoulouf	Consultant	MNAFM	Financial Management
Anas Abou El Mikias	Sr. Fin. Mgmt. Specialist	MNAFM	Financial Management
Samia Msadek	Sr. Fin. Mgmt. Specialist	MNAFM	Financial Management
Rino Coppola	Consultant	MNSSD	Fisheries statistics
Bernard Bridier	Consultant	MNSSD	Law
Philippe J. M. Blanc	Consultant	MNSSD	Livestock
Jean Paul Boutonnet	Consultant	MNSSD	Livestock
Hubert Devautour	Consultant	MNSSD	Marketing
Tom Pomeroy	Consultant/ICR	MNSSD	Marketing
Joanne Nickerson	Operations Analyst	EASOP	Operations
Amakelech Teferi-Bel	Consultant	MNSSD	Plant Protection
Nadia F-Z. Gouhier	Procurement Analyst	MNAPR	Procurement
Georges Khoury Haddad	Consultant	MNAPR	Procurement
Pierre Rondot	Sr. Sector Economist	MNSSD	Producer Organizations TTL and/ Ag.
Nabil M. Chaherli	Sr. Sector Economist	MNSSD	Economics
Marie-Helene Collion	Lead Agriculturist	LCSAR	TTL/ and Ag. Services

Annex B. Other data annexes

Agriculture Producer Organizations

Cooperatives for delivery of economic services (CSA)

These groups are involved in milk collection and provision of livestock services, agricultural input supply and some crop marketing. The majority of cooperatives are nonperforming or inactive (with the exception of milk collection and wine-production) and there is little sense of farmer ownership. Cooperatives were set up as Government institutions. While they are no longer official government institutions farmers and government employees still see them as such, not as farmer-controlled bodies. Managers are unqualified and neither members nor board members participate in cooperative management. Central Government disengagement from cooperatives has been replaced by local Government intervention. They have bureaucratic management practices, making it difficult for them to compete against genuinely private operations. There is no bottom-up regional and national cooperative union or federation. Successful cooperatives (milk and wine) supply services as requested by their members, with pricing and payment arrangements suited to members' needs, and have professional managers, staff and management systems.

Agricultural and Fishery Development Groups (GDAP)

Non-profit associations of farmers and fisherfolk, whose mandate is to manage collectively the natural resources of a clearly identified zone and contribute to local development. The GDAP legal status was created in 1994 initially allowing them to commercialize members produce. In 2004 their status was redefined restricting them from commercial activity. Their activities are now limited to (i) extension (ii) promoting cooperation, (iii) protecting and managing natural resources, (iv) supporting local investment and basic infrastructure and (v) addressing land tenure issues. They receive no Government funding and have no access to loans or other sources of revenues.

Inter-professional Groups (GIP)

Inter-professional Groups facilitate coordination between all the actors in a supply chain (producers, processors and traders). There are five Inter-professional Groups covering the following areas: milk, fish production, animal production, fruit production and vegetable production. GIPs are effectively an arm of the administration. They are managed by a General Director, who is appointed by the Ministry of Agriculture. A quarter of their board members are from Government and the others are from the Farmers and Fisherfolk Union and its equivalent for industry. They are financed through a portion of taxes collected on agricultural products sold on wholesale markets. The Department of Investment of the Ministry of Agriculture fixes the allocation to each GIP.

The Farmers and Fisherfolk's Union (UTAP)

This is the only farmers union permitted by law, and represents a quarter of Tunisian agricultural producers. It is active on the boards of cooperatives, Inter-professional Groups and technical agricultural centers. UTAP leaders are large farmers, with political ties, and are usually former civil servants and therefore not perceived as representing ordinary farmers' interests.

Technical Agricultural Centers (CTA)

Created at UTAP's initiative, with the objective of linking research and extension to farmers. There are three Centers, covering cereals, potatoes and biological agriculture. They are financed through a portion of taxes collected on agricultural wholesale markets. In practice they are under the authority of the Ministry of Agriculture which nominates their Directors.

Central Cooperatives

There are seven Central cooperatives that primarily play a role in the administered cereals market. The Central Cooperatives sell cereals and supply agricultural inputs and equipment. The Cereal Office delegates 54% of its cereals collection monopoly to three Central Cooperatives. Members and users believe that these cooperatives are arms of Government, since they are not managed as cooperatives. They have no member cooperatives and election to their governing bodies is not transparent. Management is centralized. They lack accounting systems and are highly indebted.

(source: World Bank 2006 Tunisia Agricultural Policy Review)

Annex C. List of Persons Met

Bank Staff

Marie Helen Collion, TTL
 Pierre Rondot, former TTL
 Moez Makhlouf, Financial Management Systems Consultant
 Moncef Zghidi, World Bank Consultant in charge of Producer Organization Component of Agriculture Services Project

Government

Toukabri Abdelmoumen, General Administration, Agency of Promotion of Agriculture Investment
 Labidi Adjelbaki, Pesticide Lab, The Plant Protection and Quarantine Service
 Honen Abioi Ben Ayeb, Agency of Promotion of Agriculture Investment
 Apef Ben Amara, Agency of Promotion of Agriculture Investment
 Ali Aydi, Director General, Ministry of Agriculture DG/FIOP
 M'Nasri Belgacem, Director General, National Observatory of Agriculture
 Nasraoui Bouzid, Director General The Plant Protection and Quarantine Service
 Moussa Chaaburre, Directorate General of Fisheries and Aquaculture
 Loukil Chiraz, Agency of Promotion of Agriculture Investment
 Sadok Elamri, Program Specialist UNDP (former project coordinator, Agriculture Services Project)
 Chiha Belgarour Falma, Plant analysis, The Plant Protection and Quarantine Service
 Helldi Fehhie, Quarantine Control, The Plant Protection and Quarantine Service
 Abdellatif Ghedira, Director General, Agency of Promotion of Agriculture Investment
 Mohamed Lotfi Grad, Ministry of Investment and International Cooperation
 Methlouthi Habib, Agency of Promotion of Agriculture Investment
 Zeramdini Hamda, Director Agency of Extension and Agricultural Training
 Chourabi Hassen, Director of Professional and Private Extension, Ministry of Agriculture, Hydrologic Resources and Fishing
 Sioud Hassine, Director General, Agency of Extension and Agricultural Training
 Fethia Helali, The Plant Protection and Quarantine Service
 Boudali Hideru, Plant services, The Plant Protection and Quarantine Service
 Ben Atia Imed, Agricultural Investment Promotion Agency
 Dr. Wannes Ined, Veterinary Services, Ministry of Ministry of Agriculture, Hydrologic Resources and Fishing
 Taktak Ines, Agency of Promotion of Agriculture Investment
 Omrane Ben Jamma, Director, Livestock and Rangeland Organization
 Nourredine Kabbi, Former Director, Ministry of Planning and International Cooperation
 Ben Ammar Kamel, National Office for Olive Oil
 Riadh Louhichi, Sub Director in charge of the promotion of quality, Interprofessional Group for Red Meat and Milk, Agency of Promotion of Agriculture Investment
 Souad Mahroud, The Plant Protection and Quarantine Service

Abdallah Mallek, Former Director of DGFIOP Ministry of Agriculture
 Chalghourum Maouna, Agency of Promotion of Agriculture Investment
 Rabii Mradidi, Chief of Services of Promotion of Quality and Marketing, Inter professional
 Group for Poultry and Rabbits, Agency of Promotion of Agriculture Investment
 Ben Hmmer Najeh, Agency of Promotion of Agriculture Investment
 Prof. Bouzid Nasraoui, Editor in Chief, Tunisian Journal of Plant Protection, Institute of
 Agricultural Research and Higher Education
 Aniss Ben Rayana, Director of Planning, Monitoring and Evaluation of Research Programs,
 Institute for Agricultural Research and Higher Education
 Dr. Chadi Saghajer, Veterinary Services, Ministry of Ministry of Agriculture, Hydrologic
 Resources and Fishing
 Almed Slimane, Agency of Promotion of Agriculture Investment
 Sana Smida, Assistant to Former project coordinator Agriculture Services Support Project
 Hashabui Zaidi, Plant Pathologist, former coordinator of plant quality component, The Plant
 Protection and Quarantine Service
 Abdallah Zekri, Director General of Multilateral Cooperation, Ministry of Investment and
 International Cooperation

Producer Organization Members

Dri. Taoufik Jnaoui, Principal Veterinarian, Inter-professional Group for Red Meat and Milk
 Production
 Members of the Agricultural Development Group of Djebba
 Sanoa Mettiti, Inter-professional Group for Vegetables
 Zied Ben Youseff, Yndicate des Agriculteurs de Tunisie, GDA Eleveurs de Brebis Laitiere

