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AgBEE Snapshot: Jordan

Cover Page

Executive Summary

This Snapshot provides an overview of the major constraints within the business enabling environment for agriculture (AgBEE) in Jordan as identified in the existing literature and confirmed through stakeholder interviews. In addition, this report identifies gaps and contradictions in current knowledge with respect to the AgBEE that warrant further research and analysis.¹ As summarized in the table below, the discussion spans five key areas of agribusiness operation: accessing inputs, accessing finance, operating a business, linking to markets and competing fairly.

In general, the agricultural sector in Jordan benefits from favorable government policies and faces few legal and regulatory constraints to economic growth. Registration and licensing are reported to be straightforward and efficient, labor is readily available, inputs are easily accessible, and agriculture receives very favorable tax treatment, with many producers paying little to no taxes. Nonetheless, after peaking at a high of around 30% of GDP in 1970, agriculture now comprises less than 3% of GDP.² Agriculture in Jordan suffers from three main issues that prevent the sector from achieving its full potential.

First, water scarcity constrains production and threatens the long-term sustainability of agriculture. Current government regulation of water resources reduces productivity in the Jordan Valley yet does little to incentivize farmers to reduce water waste. Water bills are highly subsidized and, in the Highlands, are largely unpaid with little to no enforcement. The water quota system has grandfathered in higher quotas for the most water-intensive farms, which these farmers are reluctant to give up. In addition, import duties on bananas and periodic import bans on some fruits add to the profitability of these water-intensive crops. Although more water-efficient crops may also have strong market potential, there is a lack of leadership (public or private) within the sector to help farmers evaluate these opportunities.

Second, smallholders lack the opportunities and incentives to move beyond a basic marketing chain, which limits export opportunities and suppresses prices in local markets. Heavy government involvement in agricultural cooperatives in the past has limited the growth of horizontal market linkages, crucial in an environment where the average farm size is only 3-5 hectares. Extension services from the Ministry of Agriculture (MoA) are weak and farmers lack access to training on the costs and benefits of better irrigation technology, on-farm storage, or international certifications. In addition, the failure of the government to implement quality standards in local markets limits the farmers' share of the market value of their produce. Market information is available only piecemeal, and there is little evidence that the information available has been effectively used by farmers to avoid frequent market gluts that suppress local prices.

Third, the government's strategic approach to the agricultural sector prioritizes rural poverty alleviation, food security and social stability over economic growth and is deeply swayed by political pressure from wealthy farmers and Bedouin tribal leaders. Attempts to remove the duties on imported bananas or otherwise define and enforce regulations for better use of aquifers have been blocked by these interests. The MoA is traditionally weak and ineffective. The MoA, for its part, argues that it lacks the

¹ This assessment was conducted from November 14 – December 7, 2011 and consisted of a literature review followed by phone and in-country interviews with 26 stakeholders across a wide range of private agribusinesses, NGOs, government officials and donor representatives.

² USAID, Gap Analysis for Farmers and Agricultural Field Advisors (2007).

authority to effectuate change, and must revert to other ministries such as the Customs Department, the Ministry of Water and Irrigation (MWI), or the Ministry of Labor (MoL) for various types of approvals. With the exception of one recent Minister of Agriculture who was nominated by the private sector, a succession of political or tribal leaders have been awarded the post, which agribusinesses increasingly view as a political consolation prize. Meanwhile, recent export bans on tomatoes and cucumbers interfered with exporters' obligations to buyers in European markets and undermined the trust between the Jordan exporters and their European clients, threatening to curtail future foreign investment in the Jordanian agricultural sector.

Overview of Analysis

Area of Analysis	Key Constraints
Accessing Inputs	<ul style="list-style-type: none"> • Current water resources are overextended, and farmers have little incentive to reduce water usage, which threatens the long-term viability of agriculture. • Ministry of Agriculture extension services are very weak, and farmers lack guidance on a range of topics, including crop planning and international certifications for export.
Accessing Finance	<ul style="list-style-type: none"> • Banks and microfinance institutions provide very limited finance to agricultural producers, who rely almost exclusively on the state-owned Agricultural Credit Corporation. • There is no credit bureau to provide reliable borrower information to lenders.
Operating a Business	<ul style="list-style-type: none"> • Restrictions on number of foreign workers per farm, combined with the common departure of workers to seek higher wages in other sectors, results in workforce shortages. • Women laborers are entitled to a lower minimum wage than their male counterparts.
Linking to Markets	<ul style="list-style-type: none"> • Quality standards are not enforced, which limits the ability of smallholders to harness the full value of their production. • Marketing cooperatives are rare, leaving smallholders with few avenues for investing in better technology or on-farm storage or exploring export markets. • A piecemeal market information system is ineffective in guiding crop planning to avoid market gluts and low prices for producers.
Competing Fairly	<ul style="list-style-type: none"> • Occasional export bans impair the trust between exporters and their foreign clients and inhibit future foreign investment.

Accessing Inputs

Agricultural producers need stable rights to land and other resources, access to improved seed, fertilizer, and equipment, and the education and training required to put these inputs to productive use. Agribusinesses in Jordan are relatively well-off vis-à-vis their counterparts in other countries in terms of access to land, seed, fertilizer, pesticides and electricity. The scarcity of water, however, seriously limits agricultural sector productivity and growth.

Land

Agricultural land in the Jordan Valley is heavily fragmented. Although a few large farms still exist, the majority of parcels are 3-5 hectare farms created as part of the planned development of the Jordan Valley in the 1960s.³ Traditional inheritance laws that apportion land between existing heirs have also diluted the size of landholdings, although the government prohibits the subdivision of agricultural land below 3 hectares.⁴ Competition for land in the area is intense, and many of the farms are leased by farm managers or tenant farmers either because the owner has a different occupation or because the rental rate is higher than the owner's own net revenue from farming.⁵

In the Highlands, the government instituted a policy in the 1960s that granted land ownership to any individual who could prove continuous occupation or cultivation of the land for 10 years, which led to a massive land grab by the Bedouin tribes and a huge expansion of farming in the Highlands. Despite the existence of a legal procedure for formalizing land ownership obtained under this policy, much of this land has never been formalized, including parcels that have since been sold informally to third parties. According to GIZ, committees have been formed to study legalization of this land.⁶ There is currently a prohibition on the licensing of new wells in the Highlands to preserve water resources, which indirectly prohibits the creation of new farms. Nonetheless, farmers continue to plant new areas, and one agribusiness stated that, in practice, the government will eventually legalize the land and well if the farmer can prove 10 years of continuous cultivation.

There are no legal restrictions on the ownership of land by women, although Islamic inheritance rules favor sons over daughters, and it is not uncommon for a woman to cede her portion of the inheritance to her brothers. The United National Development Fund for Women reports that 10% of land owners in Jordan are women.⁷ For land with legal title, landowners report that registration and sale procedures are clear and efficient.

Water

Water is exceedingly scarce in Jordan, and the agricultural sector uses 64% of all water resources. In the Highlands, water for irrigation is extracted from groundwater basins through private wells. According to the MWI, ten of twelve groundwater basins are currently being pumped over capacity, and energy bills have increased as Highland farmers have had to dig deeper wells to pump water from the declining aquifers. In the Jordan Valley, most irrigation is done with blended water, a combination of fresh water

⁴ Land Tenure Journal, "Land Tenure in Jordan" (2011).

⁵ International Water Management Institute and Institut de recherche pour le développement, *Irrigated Agriculture, Water Pricing and Water Savings in the Lower Jordan River Basin* (in Jordan) (2007).

⁶ GIZ, *Farming in the Desert: Analysis of the Agricultural Situation in Azraq Basin* (2010).

⁷ United Nations Development Fund for Women, *The Status of Jordanian Women: Demography, Economic Participation, Political Participation and Violence* (2004), cited in Freedom House, *Women's Rights in the Middle East and North Africa: Citizenship and Justice, Country Report: Jordan*, available at <http://www.freedomhouse.org/template.cfm?page=174>.

and treated wastewater that is provided through a widespread irrigation system governed by the Jordan Valley Authority. Some studies suggest that the use of treated wastewater might damage agribusinesses' chances for worldwide certifications, due to the possible presence of chemicals and heavy metals, microbiological contamination, salinity or sedimentation.⁸

Current governmental water management is not effective in encouraging water efficiency by agricultural users, and on-farm efficiency is estimated around 30-50%. Water user fees are heavily subsidized and do not even cover maintenance and operation of the irrigation system in the Jordan Valley. Water is charged at a fixed rate per m³ above a threshold amount. Water rights are also limited by quotas based on the type of crop grown, with more water-intensive crops such as bananas and citrus receiving a higher share. The government has prohibited the planting of any new areas with bananas or citrus, which limits water use but institutionalizes a market advantage for farmers entitled to grow these lucrative crops. These farmers have little incentive to switch to more water-efficient crops because to do so would forfeit their higher quotas. Moreover, farmers balk at water restrictions when their competitors in neighboring countries refuse to abide by similar limitations on the use of shared water resources. For example, agribusinesses report that thousands of wells not sanctioned by a treaty between Jordan and Syria exist on the Syrian side of the border. Jordanian farmers reported a noticeable increase in the level of the shared aquifer this year since unrest in Syria has prevented farmers from planting their fields.

In the Jordan Valley, farmers complain about the low pressure of the JVA-operated irrigation system and regularly leave their valves open to collect additional water to properly irrigate their fields. Water users associations have been very effective in reducing the waste caused by this practice. According to the MWI, there is a current proposal to restructure water management in the Jordan Valley to give more authority to these associations. In the Highlands, illegal, unlicensed wells are common and difficult to trace. Many farmers refuse to pay their water bills, and an effort to collect unpaid water bills several years ago resulted in violent civil unrest. In addition, some of the illegal wells belong to politically-connected farmers who have invested millions, leaving the MWI reluctant to close the well without providing compensation. Despite these issues, the MWI has recently begun an initiative in collaboration with the Royal Scientific Society to use satellite imaging and electric bills to locate illegal wells.

Electricity

Jordan ranks 36 out of 183 countries on the Getting Electricity portion of the 2012 World Bank *Doing Business* survey. Electricity is widely available throughout the countryside, and the agricultural sector pays less than half of the commercial rate paid by other sectors due to heavy subsidies.⁹ While electricity is far cheaper than the diesel power it replaces, it still comprises a large portion of the total production costs for farmers. According to a recent study of farmers in the Azraq Basin, farmers report that an electric bill accounts for 9 to 22% of total production costs, while diesel accounts for 40-82% of production costs.¹⁰

In the Highlands, the use of electricity is deeply tied to the use of water. Since electricity is used to power the pumps on private wells, the spread of electricity in the Highlands has some stakeholders concerned that the cheaper cost will encourage even higher levels of water extraction. However, electricity can also be used as a carrot to encourage the legalization of land and wells and the payment

⁸ USAID, *Toward More Efficient Agricultural Production and Marketing in Jordan* (2006).

⁹ Amer S. Jabarin, *Assessment of Agricultural Production and Marketing Issues in Jordan* (2007).

¹⁰ GIZ, *Farming in the Desert: Analysis of the Agricultural Situation in Azraq Basin* (2010). By contrast, only two-thirds of Azraq farmers interviewed reported paying water bills. For these farmers, water fees amounted to 1-30% of total production costs.

of water bills. According to a GIZ study, a farmer's land and well must be legalized and any outstanding water bills paid before being connected to the electric grid.¹¹

Seed

According to agribusinesses, seed regulation in Jordan is considered the best in the region, and some foreign seed companies maintain offices in Jordan. Domestic seed production once covered all of domestic needs, but many Jordanian seed producers have now moved their production overseas in search of cheaper labor costs. Grains such as wheat, barley, and cereals are traditionally rainfed crops and are particularly vulnerable to seed shortages due to drought. Stakeholders estimate that only 1-10% of these seed requirements are met by domestic production today. Imported seed is regulated by the MoA and requires phytochemical certification and quality certification. The MoA takes a sample of each seed shipment at customs for testing. Agribusinesses deemed this process to be clear, effective and efficient. Although agribusinesses reported common delays in the testing results due to high volumes of imports, the timeframe is well known and easily accommodated through overlapping orders.

Chemicals and Fertilizer

All stakeholders agreed that the regulations for chemicals are very good. Multinational input companies are present throughout the farming regions, and agents sell directly to farmers, often accompanied by high quality training programs. Agribusinesses report that fifteen years ago, fertilizers and pesticides were mainly imported but today are mostly produced domestically, including some for export. The registration process for imported agrochemicals is considered by agribusinesses to be very flexible, with a reported timeframe of 6 months for registration of new products. Unlike many other countries, the government has not directly subsidized fertilizer for the agricultural sector and does not presently provide subsidized chemicals.¹²

Agricultural Research and Extension Services

It is widely accepted, even among government ministries and by the MoA Director of Extension, that agricultural extension services in Jordan are insufficient.¹³ A 2005 USAID study found that it is not uncommon for farmers, who receive sophisticated trainings from input suppliers, to be more knowledgeable than the extension agents, and the agents may actively avoid field visits because of the risk of humiliation. The extension service lacks the cars and fuel needed to conduct regular field visits, and agents must apply three days in advance to obtain approval to travel. In addition, extension agents lack a financial or professional incentive to do a better job.

National Center for Agricultural Research and Extension (NCARE) was created in 2007 through the merger of agricultural research staff at the National Center for Agricultural Research and Technology Transfer and the MoA Department of Extension Agents. NCARE is attempting to improve the quality of extension through establishing joint research and extension teams within the institute and improving outreach through field visits and farm schools. However, agribusinesses report that the merger has created no visible improvements in extension services thus far.

Absent effective extension services from the MoA, input suppliers have stepped in to fill the void.¹⁴ While the trainings conducted by sales agents of private input companies are reported to be highly

¹¹ GIZ, Farming in the Desert: Analysis of the Agricultural Situation in Azraq Basin (2010). Similarly, applications for financing from the Agricultural Credit Corporation require Highland farmers to provide proof of a legal well license.

¹² MEDFROL Project, National Agricultural Policy Report for Jordan (2006).

¹³ USAID, Assessment of Agricultural Extension Services in Jordan Valley and Amman-Zarqa Basin Highlands in Jordan (2005).

¹⁴ USAID, Assessment of Agricultural Extension Services in Jordan Valley and Amman-Zarqa Basin Highlands in Jordan (2005).

sophisticated and very informative for farmers, they are also reportedly subject to bias and lack any comparative information to allow farmers to make educated decisions. Moreover, input companies admit that large farms that spend the most money naturally receive the bulk of the information and support. Poorer smallholders and women do not have similar levels of access. Training is also provided to a small degree by the MWI, JVA and JEPA.

Accessing Finance

Lack of credit is one of the greatest barriers to agricultural enterprise growth in developing countries. Agribusiness is considered risky, and the loan products that are available are often very expensive and the terms unsuited to the seasonal nature of agriculture. Where secure land rights are unavailable, farmers are frequently unable to produce suitable collateral. Access to finance for agriculture in Jordan is unique in that the sector relies heavily on the state-owned Agricultural Credit Corporation (ACC) that provides loans at discounted interest rates to stakeholders throughout the sector. The ACC serves the sector well but has inhibited the development of private financial services for farmers.

Access to Financial Services

Only 1.4% of all bank loans go to the agricultural sector, which represents 3% of GDP. Banks charge 9-10% interest plus a 1% commission fee on loans to agribusinesses, compared to a 8% rate paid by the housing and construction sectors and 4% for car loans. Although this average compares favorably to many other countries, the majority of farmers do not have the scale and profit to allow them to access traditional bank finance.

Microfinance institutions (MFIs) exist but to date have not focused much of their lending on agricultural producers. One company interviewed explained that credit is offered for all types of activities *except* agricultural production due to the high risks and low capacity to repay. According to this company, farmers have no strategy for marketing, no permanent intermediaries, and are at the mercy of unpredictable rains. In addition, MFIs report that farmers prefer to borrow from the ACC and rarely approach MFIs or traditional banks. MFI loans are small, with an average amount of \$900 over 14 months at 20% interest. Much of the existing microfinance is directed at women, including women business owners operating in satellite industries of the agricultural sector, such as chicken or lamb businesses or bakeries.¹⁵ According to one MFI, more than 92% of the company's portfolio of agricultural sector loans is comprised of loans to women, although none of those loans are given to women working directly in the fields. The company reported a nearly zero rate of default, not necessarily due to the success of the clients' ventures but due to most clients finding some means of repayment in order to protect their reputations.

Finance for farmers in Jordan is overwhelmingly provided by the Agricultural Credit Corporation (ACC), a semi-autonomous government agency charged with contributing to the promotion, support and development of the agricultural sector in Jordan. In 2007, 89% of all ACC loans went to small farmers with holdings no larger than 3 hectares, 6% were provided to medium-sized holdings, and 2% of the loans went to landless field laborers.¹⁶ The ACC provides short (2 years), medium (3-10 years), and long-term (11-12 years) loans as well as seasonal loans (12 months). Interest rates on ACC loans vary

¹⁵ An analysis of MixMarket data for 7 major MFIs reveals that women comprise 88.95% of all active MFI borrowers. See MixMarket, Microfinance in Jordan: Country Profile, available at <http://www.mixmarket.org/mfi/country/Jordan>.

¹⁶ Jordan Ministry of Agriculture, Strategies: Agricultural Document (date unknown), available at <http://www.moa.gov.jo/moaen/Abouttheministry/Strategies/AgriculturalDocument/tabid/62/Default.aspx>.

between 6.5 to 9%, depending on the loan type, amount, and goals.¹⁷ Repayment terms are very lenient, including substantial grace periods and opportunities for refinancing. The ACC also extends micro-credit loans for family businesses (3,000 JD per loan max) and finances agricultural projects for unemployed members of the Agricultural Engineers Syndicate, pursuant to a 5 year agreement with the AES (5,000 JD per project). The ACC reports that 30-37% of its portfolio consists of loans to women. In some specialized loans programs, this percentage is greater than 50%.

Secured Transactions

As security for a loan, MFIs generally require personal guarantees from another farmer or neighbor as well as a small cash flow study. According to one MFI, land is not accepted as collateral, because there is a high likelihood of default and it is considered unprofessional to accept collateral worth 50,000-60,000 JD for a loan of only 5,000 JD. The ACC accepts land as collateral but is very reluctant to enforce against it. In exceptional circumstances, the ACC has taken title to a farmer's land but permitted the farmer to remain on the land until he finds the money to pay off the loan. The ACC never sells the property to a third party. If the farmer does not own land, the ACC will accept a financial guarantee or a claim against a salary. Moveable property is not used in part because farmers lack acceptable property. Equipment is often rented, and farmers' cars are often old and lack sufficient retail value to be used as collateral. In addition, secured transactions legislation in Jordan is lacking. The IFC is currently working with the government to develop a legal framework for secured lending based on moveable property as well as the establishment of a collateral registry.¹⁸

Non-traditional Financing Arrangements

Inputs are generally sold to farmers on credit. One input supplier estimated that 85% of his business is done on credit. The amount of credit and the duration of the loan depend on the type of crop grown and the farmer's reputation with the supplier. Each farmer is known by the supplier and given a credit ceiling and a loan term of up to 8 months. However, farmers who do not meet the supplier's specifications for receiving credit are restricted to cash sales. Many smallholders instead receive financing from a marketing agent in the form of cash, inputs or transportation. These agents sell the farmer's products at the wholesale market and deduct the amount of the loan plus a 5% commission fee from the total receipts from sales. Smallholders complain that the agents take most of their profits, and IFAD reports that farmers may end up indebted to these agents.¹⁹

Agricultural Insurance

Agricultural producers in Jordan face a yearly risk of loss due to natural disasters such as drought and frosts.²⁰ Since no private insurance is available to the agricultural sector, the government has commonly stepped in to compensate farmers directly from the national treasury. A new Agricultural Risk and Emergency Fund was recently created within the MoA to compensate farmers for these types of losses and is to be funded by the government with the participation of agricultural sector beneficiaries. The status of the implementation of the Fund is unknown at the time of publication.

Credit Information

There is no public or private credit registry in Jordan. The Central Bank, however, maintains a database with information about borrowers who receive for loans over 30,000 JD. Banks are required to report

¹⁷ Agricultural Credit Corporation, Farmers Guide (2008).

¹⁸ CPI Financial, "IFC helps Jordan develop secured lending law for SMEs" (July 27, 2010), available at <http://www.cpifinancial.net/v2/print.aspx?pg=news&aid=5618>.

¹⁹ IFAD, Rural Poverty Portal, Rural Poverty in Jordan, available at <http://www.ruralpovertyportal.org/web/guest/country/home/tags/jordan>.

²⁰ IFAD, Hashemite Kingdom of Jordan Country Strategic Opportunities Programme (2007).

this information to the Central Bank, and the information can then be requested by other banks. Banks and MFIs also informally share information about borrowers, but it is not complete and is often ignored, and formal requests to share information may even violate existing laws and regulations.²¹ In addition, the ACC has its own registry of borrowers but does not share this information with other financial institutions. In 2008, the IFC and USAID announced a joint project to assist in the establishment of a private credit bureau to be monitored by the Central Bank of Jordan, and the new bureau is expected to begin operation in 2012.²²

Government Intervention

With its subsidized interest rates and flexible repayment terms, the ACC is virtually the sole source for credit for smallholders in Jordan. One microfinance institution argued that MFIs and traditional banks cannot compete with these terms and that farmers rarely approach them. This discourages private financial institutions from developing products to suit the unique needs and risks of the agricultural sector and puts the sector at risk in the event the ACC were to fail. Previous reports have stated that the ACC regularly requires recapitalization from the government to make up for an arrearage rate of 25%.²³ The ACC concedes that up to 20% of its borrowers require extra time to repay their loans but claims that it is exceedingly rare for a loan to default completely.²⁴ In addition, the ACC insists that it receives enough from borrowers to maintain a balanced budget and receives no government subsidies. The ACC does, however, occasionally offer specialized loan projects in support of government policies or objectives for which the government will pay some or all of the borrower's interest. The ACC also claims to have ample funds to meet demand from farmers and agribusinesses. It is unclear what overall impact the ACC has on producer behavior (e.g., by disincentivizing growth beyond the smallholder level) and how that impacts investment and growth within the agricultural sector. Despite previous proposals that recommended privatizing the agency, the ACC reports that there is no such plan is currently under consideration.

Operating a Business

Regulation and taxation are crucial to the ability of the government to protect the health and safety of its people and fund long-term growth initiatives such as health and education programs, infrastructure projects and social security. In Jordan, the government has instituted a number of reforms in recent years aimed at easing the regulatory and tax burden on businesses.²⁵ The implementation of these reforms has been slowed, however, by frequent turnover in government offices. Nonetheless, agribusinesses generally express satisfaction with registration, licensing, and taxation procedures that they deem simple and efficient.

Business Registration and Licensing

²¹ USAID, A White Paper on Legal Obstacles to SME Loans in Jordan (2008).

²² Trade Finance Magazine, "Jordan to introduce credit bureau legislation with IFC and USAID" (4 Dec. 2008), available at <http://www.tradefinancemagazine.com/Article/2143923/Jordan-to-introduce-credit-bureau-legislation-with-IFC-and-USAID.html>. Ameinfo.com, "Jordan to launch credit information bureau" (18 Aug. 2011), available at <http://www.ameinfo.com/273230.html>.

²³ USAID, Toward More Efficient Agricultural Production and Marketing in Jordan (2006).

²⁴ By contrast, 90% of women borrowers repay their loans on time.

²⁵ World Bank, Country Brief: Jordan, available at <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/MENAEXT/JORDANEXTN/0,,menuPK:315140~pagePK:141132~piPK:141107~theSitePK:315130,00.html>.

Traders and merchants report no delays or obstacles in the process for registering and licensing a business. To register, new companies must go to the Ministry of Trade and Industry (MoTI) to file a simple application including the company's name and other information, as well as the payment of certain fees. According to the World Bank *Doing Business* survey for 2012, the 17.9% paid-in minimum capital requirement has been eliminated, and costs have dropped considerably in the past 8 years from a high of 104.1% of income per capita in 2004 to 13.9% today. In addition, companies must register with the Chamber of Commerce. For shops in the central vegetable market in Amman, traders must obtain a lease and license from the Grand Municipality of Amman. There are no legal restrictions on business ownership by women.

Foreign investors and certain sectors, including agriculture, can use the one-stop shop for company registration and licensing housed within the Jordan Investment Board. According to the MoA, coordination and communication between the ministries involved in this process is quite poor. The MoA reported complaints from applicants regarding delays in obtaining approvals through this process and suggested some applicants would be more efficiently served if they approached each ministry on their own rather than using the one-stop shop.

One farmer stated that many smallholders choose not to register, in part due to the cost of hiring a part-time accountant to assist with the required paperwork. Interestingly, running an unregistered business reportedly does not affect a farmer's ability to obtain work permits for foreign workers because the two responsible ministries (the MoTI and the MoL) do not share records with one another.

Taxation

Because of the social and cultural dimension of agriculture, the sector receives preferential treatment for tax purposes. Income from agricultural production is exempt from taxation for individuals and cooperatives. Companies must pay a company tax of 14% on sales to local markets, but are exempt from tax on net revenue derived from exports.²⁶ Agribusinesses report that some companies have formed cooperatives in an effort to circumvent the company tax. Merchants and traders who are not engaged directly in agricultural production are subject to ordinary rates of individual or company income tax. In addition, all sales are subject to the General Sales Tax at a rate of 16%, although many agricultural products are subject to a reduced 4% rate or exempt altogether. Import duties are paid through advance payments equal to 4% of the value of the shipment, as estimated by the Customs Department. Once per year, shortfalls or refunds are settled through submitting sales invoices. Merchants interviewed reported no difficulties with these procedures nor the amount of tax paid. According to agribusinesses, a recent decree from the King will exempt the sales tax on input imports, but implementation has not yet occurred. To date, agricultural land has not been subject to annual land taxes.²⁷

Employing Workers

Most of the agricultural workforce is comprised of unskilled foreign laborers. Some farm managers are Jordanian, and local women are often hired seasonally to help with collecting the harvest. Satellite industries such as transportation, packing and grading also employ Jordanians, although agribusinesses

²⁶ According to the United States Trade Representative, this export tax exemption has been approved by the WTO through December 2015. USTR, National Trade Estimate Report on Foreign Trade Barriers (2010), available at <http://www.ustr.gov/about-us/press-office/reports-and-publications/2010>.

²⁷ Income Tax No. 57 of 1985, as amended (2009), available at <http://www.istd.gov.jo/NR/rdonlyres/3C4FF713-AA3F-4FDC-8B98-754EE6E8F2D1/2808/incomeenglish.pdf>; General Sales Tax Law No. 6 of 1994, as amended (2009), available at <http://www.istd.gov.jo/NR/rdonlyres/3C4FF713-AA3F-4FDC-8B98-754EE6E8F2D1/2821/gstenglish.pdf>.

estimate that locals still make up only 25% of this workforce. According to the World Bank, there was a substantial shift to foreign labor in the agricultural sector between 2000 and 2005.²⁸

Despite a high unemployment rate in Jordan, agribusinesses report that Jordanians are not interested in agricultural jobs. As one employer explained, it is preferable to hire foreign workers over Jordanians because they have a better work ethic, little to no family obligations, and are willing to monitor the farm or factory through the night, whereas Jordanians refuse to work at night and see farm work as having a social stigma. The Jordanian university system, while known in the region for excellence, produces a surplus of agronomists each year but little to no agricultural technicians. Vocational training for agriculture, which would better suit the needs of employers, is lacking.²⁹

Foreign laborers must be registered with the Ministry of Labor. Farms are allowed a specific number of foreign work permits based on the size of the farm. These permits are valid for one year, after which the laborer often moves to a new farm. The recent introduction of online permitting has reportedly caused difficulties, as many farmers are unfamiliar with computers. In addition, many laborers abandon the farms in favor of more lucrative construction jobs, leaving the farmer understaffed and unable to obtain additional permits for foreign labor for that year. This loss is doubly damaging to farmers who provide on-the-farm training to these workers.

Although Jordanian employment in agriculture is low overall, Jordanian women are prevalent throughout the sector. Women provide the majority of unpaid work on family farms, although it is rare for women to own their own farms. Jordanian women also work as seasonal employees on large farms in the Jordan Valley. However, these women are paid less than their foreign male counterparts and are not permitted to work as many hours: women earn 1 JD/hour for a maximum of 5 hours per day while men earn 1.25 JD/hour for 8 hours per day. Nonetheless, there are many powerful women in agriculture. Agribusinesses spoke of two high profile women farm owners, one in the Highlands and one in the Jordan Valley. In addition, the head of the Awareness, Monitoring and Control Committee of the Jordan Food & Drug Administration and the Secretary General of the MWI are both women.

Creating and Enforcing Contracts

Traditional family- or community-based dispute resolution methods are common in Jordan, and it is rare for disputes to be taken to court. In the words of one merchant, “we have things higher than courts.” He also complained that the court takes a lot of time and attention away from his business, and he prefers to continue negotiating with the purchaser or simply cut him loose and accept the loss in lieu of hiring a lawyer, paying lots of money and attending long sessions in court. Disputes between small farmers or traders are usually resolved by local leaders or by large traders in the wholesale market. No one interviewed expressed dissatisfaction with the existing dispute resolution methods.

Linking to markets

A primary component of agricultural competitiveness is marketing infrastructure, *i.e.* the physical and information systems for marketing agricultural products beyond the farm gate. Inadequate marketing infrastructure is cited by agribusinesses as one of the main constraints to growth in the agricultural

²⁸ World Bank, Hashemite Kingdom of Jordan: Resolving Jordan’s Labor Market Paradox of Concurrent Economic Growth and High Unemployment (2008).

²⁹ USAID, Toward More Efficient Agricultural Production and Marketing in Jordan (2006).

sector in Jordan. The majority of farmers have poor post-harvest practices, poor market linkages and limited marketing facilities.³⁰ In addition, farmers lack opportunities and incentives to move to a more sophisticated marketing chain.

Transportation Infrastructure

Jordan has a fleet of around 600 refrigerated trucks, mainly used for the export of fruits and vegetables to neighboring Arab markets.³¹ Most of these trucks are old, and according to the JVA, less than 5% meet European specifications. Agribusinesses did not express any constraints with road access to Arab countries, although concerns were raised over the possible impact of the security situation in Syria, which is the main overland route to Europe. Some high-quality produce is shipped by airfreight to Europe and North America through Royal Jordanian Airlines. Exporters noted difficulties in securing cargo space on commercial airlines, particularly for start-up exporters and medium-sized exporters, because the volume of these shipments does not provide a sufficient incentive for the airline to guarantee space. Exporters reported disruptions in delivery to overseas clients when needed space is not available. Some produce is shipped through Israeli ports, although exporters noted constraints relating to limited economies of scale and high port taxes imposed by Israel.

Post-harvest Storage Facilities

Although on-farm storage is largely unavailable, there are twenty-seven centralized cold storage units in the country, some of which are located in central wholesale markets and rent space to merchants on a monthly or per pallet basis. Larger agribusinesses and merchants noted that storage is readily available at a reasonable price. Smallholders, however, generally do not utilize storage. Fruits and vegetables are harvested and packed into polystyrene containers without sorting, grading or weighing. These containers are transported using small unrefrigerated, open-bed pick-up trucks to wholesale markets or exporters' packing facilities. Increased use of on-farm or public storage would allow farmers to avoid market gluts by storing apples and bananas until market prices increase, as occurs in Egypt.

Local Markets

According to the JVA, over 90% of farmers sell directly to the wholesale markets, mostly through the use of a marketing agent who works on commission. Jordan has one central wholesale market, seven municipality wholesale markets and one cut-flower wholesale market. Produce is sold in auctions, and the marketing agent obtains 5-7% commission on the sale value.³² Wholesalers, retailers and exporters buy directly from the wholesale markets. There are no legal restrictions on participation, but in practice female involvement in the wholesale markets is limited. One merchant remarked that markets are 'man's work' and that women who came to work at the markets in the past did not stay long due to the crude talk of the men.

Marketing Information System

There is no comprehensive market information system in Jordan, but pieces of such a system are now in place. For the last 4-5 years, the government has provided farmers with information on the amount and type of crops grown in each area of the country (via internet) and price information for each month (on television and in the central vegetable markets). Price information is also available on the Amman municipality website, but as prices in the central market vary by the hour, this information is not

³⁰ IFAD, Hashemite Kingdom of Jordan Country Strategic Opportunities Programme (2007).

³¹ Jordan Journal of Agricultural Sciences, "Assessing Porter's Framework for National Advantage: the Case of Jordanian Agriculture" (2010).

³² Jordan Journal of Agricultural Sciences, "Assessing Porter's Framework for National Advantage: the Case of Jordanian Agriculture" (2010).

considered up-to-date. In addition, annual price records are announced yearly in the newspaper. Farmers thus space out plantings in reliance on the previous year's market prices for different months. Agribusinesses, however, questioned the impact of this system, citing the regular surplus of vegetables in the local markets (particularly of tomatoes) and the low prices farmers regularly receive. They claim that the information provided by the government is out of date, often inaccurate and not properly utilized by farmers.

Standards and Laboratory Testing

There is no standard grading or marking on boxes of domestically-produced fruits and vegetables in Jordanian wholesale markets. Produce is sold in pre-packaged polystyrene containers, and it is common for farmers to disguise poorer quality produce under top quality produce in the boxes. Agricultural quality standards have been issued, but the government has not yet been able to implement and enforce them. According to agribusinesses, an initial attempt to enforce the new rules failed in the face of substantial opposition from small farmers. Farmers lacked sufficient market information on the possible benefits of quality standards and were convinced by their Gulf export agents to oppose the measure. While Gulf markets do not require agricultural exports to meet quality specifications, exports to the EU market are held to a very high quality standard that can only be met by specialized agribusinesses with large farming areas and the means to invest in the facilities. Organic farming certification is rarely applied but is increasing. The Jordan River Foundation, a nonprofit chaired by Queen Rania, has worked since 2007 to develop organic farming regulations and domestic certification bodies, train farmers, and raise public awareness of the benefits of organic products.³³

Agribusinesses report that there is domestic demand for higher quality and organic produce. They note that despite the lack of implemented standards, domestic and Arab retailers regularly sort for higher quality produce at the wholesale markets and are willing to pay a premium for it. Supermarkets and other retailers send agents to the wholesale markets who know their requirements in terms of quality or have a longstanding relationship with a trader who knows their requirements. In the Highlands, some exporters from Turkey come to farms to grade and select the produce they want for themselves.

Food safety standards are considered in line with international norms.³⁴ Health inspectors for the municipality patrol the central markets to control for produce not fit for human consumption, as well as to ensure that the listed weight on a box is correct. One merchant interviewed considered the inspectors to be fair and impartial (*i.e.*, working for buyers and sellers). Produce and livestock are inspected at farms and in processing facilities for chemical residue and other health violations. There is some corruption in the system, although efforts are ongoing to reduce this problem. A current project in conjunction with the IFC will combine all nine Jordanian inspectorates into one body. Jordan also has a number of sophisticated and efficient laboratories for food safety testing, some of which are internationally accredited.

Trade Facilitation

In general, agribusinesses did not express major concerns with import and export licensing or customs administration. Importers must obtain an annual import license from the MoTI as well as a permit from the MoA for each shipment. Some merchants maintain an agent at the MoA to handle paperwork for shipments on a daily basis. Importers did report a problem with customs officials not properly applying

³³ Jordan River Foundation, Organic Farming Initiative, available at http://www.jordanriver.jo/program_capacity_organic.asp.

³⁴ Jordan Journal of Agricultural Sciences, "Assessing Porter's Framework for National Advantage: the Case of Jordanian Agriculture" (2010).

import tax exemptions on certain agricultural sector products. Items such as MPKs and nursery screens have been claimed by customs officials to have dual use and been charged the standard 14-16% sales tax. The shipment cannot be cleared and released until this dispute is resolved, causing potential disruptions in supply for the importer.

Intra-industry Linkages

The highly fragmented nature of agricultural holdings in Jordan makes horizontal linkages highly pertinent for developing production and marketing capacities for farmers. Despite recent tax breaks for cooperatives, cooperatives are generally underutilized for marketing purposes. Due to heavy government control of cooperatives during the 1970s-1990s, agricultural cooperatives failed to develop the skills needed to survive without government subsidies and many disbanded when the Jordan Cooperative Bank closed its doors in 1989.³⁵ Today, cooperatives exist in the Jordan Valley, but their activities are limited to buying inputs in bulk and serving as water users associations. One leading academic pointed to the recent success of these water users associations in the Jordan Valley and suggested that these could be expanded to include marketing activities in the future.

Some smallholders participate in contract farming for larger agribusinesses or exporters, where farmers receive technical advice, inputs, and a down payment on future sales in exchange for growing crops according to the buyer's specifications. Agribusinesses have reported that initial attempts to work with these farmers failed, because they were reluctant to raise the new varieties and suspicious of their profitability. Some agribusinesses have won over their trust by leading by example (*i.e.*, establishing smaller scale ventures on their own farm, proving their profitability to local farmers, and assisting these farmers in gradually adapting to the required growing standards).

The Jordanian Exporters and Producers Association (JEPA) also provides its members with intensive training for export. JEPA was established and funded by USAID in the early 1990s. JEPA works with its members to increase the amount and quality of Jordanian agricultural exports through exhibitions and trade fairs, training on market intelligence, assistance with certification for GlobalGAP, maintaining an information database on their website, and advocacy efforts.³⁶ JEPA members are responsible for 100% of Jordanian agricultural exports to Europe and 60-70% to the Arab States.

Competing Fairly

An open "culture of competition" is essential to agriculture-led growth. In Jordan, government policy towards agriculture is deeply tied to political, social and environmental concerns, even at the expense of economic growth. The instability and risk caused by the government's willingness to intervene in agricultural markets inhibits investment in the sector.

Competition Law and Policy

The Competition Law was adopted in 2004 and is viewed by local lawyers as providing well-functioning and open access to agricultural markets. The law also created a Competition Directorate with a clear

³⁵ World Bank/ILO, Cooperative Sector: Agenda for Renewal and Growth (1999). The chief government agency charged with governing cooperatives, the Jordan Cooperative Corporation, still exists today but functions only as a registrar for cooperatives. ILO, Cooperatives in the Arab World: Reaffirming their validity for local and regional development (2010).

³⁶ JEPA website, available at <http://www.jepa.org.jo/>.

mandate to execute and enforce competition policies.³⁷ Agribusinesses did not report any major issues with competition in the agricultural sector. Regulations for markets require transparency in auction bidding, and interviewees were unaware of any anti-competitive practices in the auction process.

Government Interventions in the Agricultural Market

In the 1980s and 90s, the MoA supported the agricultural sector through a range of subsidies for water, fuels, equipment and some field crops and stone fruits.³⁸ Over the past decade, the market has been liberalized substantially in Jordan. Nonetheless, Jordanian agricultural production, including that which is destined for export, continues to receive large subsidies for water and electricity, near total exemption from taxation, and the benefit of access to lower-cost financing through the ACC.³⁹ Recent concerns about the available supply of grains, fodder, and other “deficit crops” have also led to special incentives for domestic production of these crops, despite the fact that they are not water-efficient.⁴⁰

International Trade Policy

Jordan has a long history of protectionism in its trade policy regime, but significant reforms have been undertaken since accession to the WTO in 2000. The government has introduced measures to reduce tariff rates, simplify customs procedures, and reduce import restrictions.⁴¹ In addition to WTO membership, Jordan has agreements with the EU the Greater Arab Free Trade Area and has had observer status in COMESA since 2006.⁴² Nonetheless, the government has a recognized willingness to intervene in trade markets to protect local producers and maintain food security. According to one government interviewee, the use of subsidies to protect domestic agriculture is necessary from a food security and stability viewpoint and cannot be stopped before devastated areas of the country are rehabilitated with stable incomes, regardless of obligations to the WTO.

The government regularly steps in to protect domestic producers through import duties or bans during the high season. For example, the import of tomatoes is disallowed during tomato season, and olive oil imports are restricted during the olive harvest period. This approach is supported not just by local producers who benefit from these policies but also importers of foreign produce. One such importer agreed that the policy is fair to protect local farmers at peak times and stated that the periods of higher import duties are well known and regularly communicated by the MoA. In addition, the importer gave the government high marks for honesty: when the Customs Department discovered that importers had been overcharged for fees on apples over 4 years, the money was reimbursed to all affected merchants.

The government has also shown a willingness to ban exports in the name of food security to artificially lower prices in local markets. For example, according to exporters, an export ban on cucumbers and tomatoes was implemented recently but was removed after approximately one week due to private sector opposition. Agribusinesses argue that these bans do not have the intended effect on local prices,

³⁷ Lubna Hawamdeh, Ali Sharif Zu'bi Advocates and Legal Consultants, “The Competition Law,” available at <http://www.iflr1000.com/LegislationGuide/92/The-Competition-Law.html>.

³⁸ GIZ, Farming in the Desert: Analysis of the Agricultural Situation in Azraq Basin (2010).

³⁹ Amer S. Jabarin, Assessment of Agricultural Production and Marketing Issues in Jordan (2007). Subsidies for water are estimated to account for 50% of total agricultural subsidies. World Bank, Hashemite Kingdom of Jordan Country Environmental Analysis (2009).

⁴⁰ Jordan Ministry of Agriculture, Strategies: Agricultural Document (date unknown), available at <http://www.moa.gov.jo/moaen/Abouttheministry/Strategies/AgriculturalDocument/tabid/62/Default.aspx>.

⁴¹ MEDFROL Project, National Agricultural Policy Report for Jordan (2006).

⁴² A bid to join the Gulf Cooperation Council was rejected in December 2011. GulfNews.com, “Door to join GCC permanently shut: Kuwait official (Dec. 16, 2011), available at <http://gulfnews.com/news/gulf/kuwait/door-to-join-gcc-permanently-shut-kuwait-official-1.952141>.

because much of the blocked exports are of different varieties that are less appealing to domestic consumers and/or are of such a higher quality and price that domestic consumers refuse to pay. Moreover, these disruptions undermine trust between the exporters and their European clients. Exporters also complained about the instability and risk posed by continuous changes in government rules and regulations. One exporter reported that he had sold his production business because he could not predict government policies from year to year. He also reported that foreign awareness of the instability of domestic regulation has inhibited his efforts to attract foreign investment in agriculture.

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Recommendations for Further Research

Accessing Inputs	
Water	<p>Research positive and negative incentives to change water user behavior in the Highlands. Study stakeholders' motivations and anticipated response to potential incentives for increased water efficiency in the Highlands, both positive (e.g., demonstrating market need for more water efficient crops) and negative (e.g., removing the subsidies on electricity). In particular, evaluate the extent to which quotas for water usage deter farmers from switching to more water-efficient crops.</p> <p>Investigate the impact of the use of blended water on exports to Europe. Some studies suggest that the use of blended water might damage Jordan Valley producers' chances for worldwide certifications, due to the possible presence of chemicals and heavy metals, microbiological contamination, salinity or sedimentation. Research the market potential for crops irrigated this way, particularly in light of the government's intent to continue to increase the amount of treated wastewater used in irrigation.</p>
Accessing Finance	
Access to Financial Services	<p>Identify any potential distortive effects of the ACC. Examine the extent to which the ACC fulfills the financing needs of farmers to determine what segment of the sector, if any, is underserved and whether there are suitable alternative sources of financing available to these individuals. Specifically, determine the impact of the ACC on private lenders' interest in developing products that meet the needs of the agricultural sector and the resulting cost, if any, to farmers.</p>
Nontraditional Finance	<p>Examine the costs and incentives for farmers' preference of merchant credit over loans from formal financial institutions. According to IFAD, value chain finance arrangements are very expensive for farmers, and farmers may end up indebtedness to marketing agents. More research is needed to understand what motivates farmers to take these types of loans in lieu of formal finance from the ACC or other financial institutions and how smallholders can be protected from unfair lending terms.</p>
Agricultural Insurance	<p>Assess the potential impact of the new Agricultural Risk and Emergency Fund on the agricultural sector. It is unclear whether this Fund has been implemented, how effective it will be as a replacement to agricultural insurance and the cost burden on the MoA.</p>
Operating a Business	
Business Registration and Licensing	<p>Examine delays in the one-stop shop for registration and licensing. The MoA suggested that applicants for registration and licensing through the one-stop shop committee process may be served more quickly by carrying their application to each affected ministry. Examine the delays in processing these applications to see where communication between ministries is weak.</p>
Employing Workers	<p>Research the extent to which enforcing quality standards would stimulate local employment in associated industries. Investigate the validity of agribusinesses' claims that enforcing quality standards would increase employment in satellite</p>

	industries such as transportation, packing and grading by as much as 20-40%.
Linking to Markets	
Transportation	<i>Evaluate the cause for the low availability of air freight space for agricultural exports.</i> Examine the reasons exporters lack air freight space to determine whether this is a perpetual problem due to the low volume of agricultural exports or one that could be solved through better private sector coordination.
Post-harvest Storage Facilities	<i>Investigate the potential for capitalizing on the use of existing under-utilized storage facilities for cooperatives and farmers groups.</i> Agribusinesses point to the absence of on-farm storage as an obstacle to better marketing strategies for smallholders, who are unable to store their produce to avoid low prices due to market gluts. Further research is warranted to determine why smallholders do not take advantage of the existing centralized cold storage facilities through leasing or other mechanisms or invest in private on-farm storage.
Market Information Systems	<i>Examine the effectiveness of existing market information systems.</i> Evaluate farmers' usage of existing market information according to type of information used and medium of communication. Study methods for expanding these methods to encourage more targeting crop planning through the analysis of gaps in foreign markets.
Standards	<i>Analyze obstacles to the implementation of quality standards.</i> Agribusinesses noted that a number of stakeholders rejected the implementation of standards due to vested interests and insufficient market information. Analysis is needed to identify the stakeholders who opposed the introduction, their reasons for doing so and to develop a strategy for introducing behavioral change.
Intra-industry Linkages	<i>Assess the most viable means to integrate or consolidate smallholder production into the marketing chain.</i> Identify the reasons why marketing cooperatives have failed while water users associations have succeeded. Investigate the potential for scaling up the functions of water users associations to support post-harvest storage and collective marketing. <i>Investigate the potential for a public-private forum to design a competitive and sustainable vision for agriculture in Jordan.</i> Industry and government coordination, particularly in the areas of export markets and targeting upstream investments, is needed to improve the business practices of smallholders and the sector as a whole.

Competing Fairly	
Competition Law and Policy	<i>Examine the extent to which smallholder farmers are exposed to unfair lending practices.</i> Several private sector interviewees raised concerns that the poor negotiating position and lack of market information leaves farmers at risk of anti-competitive behavior by agents. Investigate the extent of this problem and potential mechanisms for protecting farmers through better market regulation or other methods.
Government and Donor Interventions in the Agricultural Market	<i>Examine the impact of government interventions on investment in the agricultural sector.</i> Agribusinesses reported that foreign awareness of the instability of domestic regulation has inhibited efforts to attract foreign investment. More research is needed to determine the extent of this impact on the growth of agricultural sector exports.

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