

A Study on Agro Business for Youth Entrepreneurs in Arab Countries

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Abstract

New opportunities for youth towards entrepreneurship are abound in Middle East but at the same time tuff environmental conditions too there in the dry and sun drenched regions of the Middle East which have restricted the ability of growers to deliver a broad range of crops. New solutions for the challenging surroundings have been innovated for the means of growing. The solutions have come up like indoor farming and also latest innovative technology to develop agro areas. Middle East figures the high population growth which in turn leads to rising demand for food. This food security is the increasing concern of the government. Now it is the time that the people or the youth should show a keen interest towards agro business, which will be a current trend in the global market and likely attractive of the opportunities which will outweigh the risks over time. With good financial background these regions can more concentrate on available agriculture resources like date palm, crop production, horticulture, livestock production and aquaculture industries. Implementation of new technologies by Arabs is creating new opportunities for growers. This research paper is a new vision which would try to explore the agro opportunities to the Arab youth and enhance the inclination to become successful agro entrepreneurs. This paper will also try to recognize the shift in the movement of funds towards more development in agro business which in turn would boost up the country's economy.

KEYWORDS: Agro, Youth, Entrepreneurs, Business

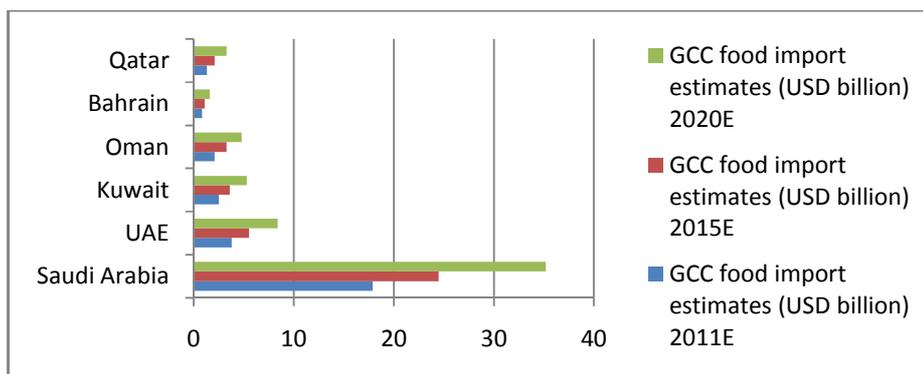
INTRODUCTION

Agriculture plays an important role in the economies of most of the countries in the Middle East and North Africa region. Opportunities in Agro Business are abound in Middle East countries but “political authoritarianism and instability have forced many investors to think twice about their plans in the short term.”(Economist Intelligence Unit, New routes to the Middle East – 2011)¹. Despite the fact that MENA is the most water-scarce and dry region in the world, many countries in the region, especially those around the Mediterranean Sea, are highly dependent on agriculture. The contribution of the agricultural sector to the overall economy varies significantly among countries in the region, ranging, for example, from about 3.2 percent in Saudi Arabia to 13.4 percent in Egypt. Large scale irrigation coupled with mechanization has enabled extensive production of high-value cash crops, including fruits, vegetables, cereals, and sugar in the Middle East.

Date palm is one of the principal agricultural products in the arid and semi-arid region of the world, especially Middle East and North Africa (MENA) region. The Arab world has more than 84 million date palm trees with the majority in Egypt, Iraq, Saudi Arabia, Iran, Algeria, Morocco, Tunisia and United Arab Emirates. Date palm trees produce huge amount of agricultural wastes in the form of dry leaves, stems, pits, seeds etc. A typical date tree can generate as much as 20 kilograms of dry leaves per annum while date pits account for almost 10 percent of date fruits. Some studies have reported that Saudi Arabia alone generates more than 200,000 tons of date palm biomass each year.

Table 1

GCC food import estimates (USD billion)			
Country	2011E	2015E	2020E
Saudi Arabia	17.9	24.5	35.2
UAE	3.8	5.5	8.4
Kuwait	2.5	3.6	5.3
Oman	2.1	3.3	4.8
Bahrain	0.8	1.1	1.6
Qatar	1.3	2.1	3.3



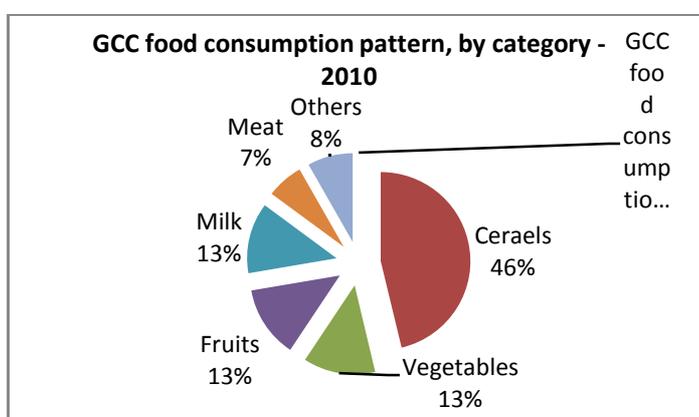
Source: EIU (E - estimates)

Rising population, growing income levels and change in consumption habits result in continuing growth in consumption levels. In order to bridge the gap between food production and food consumption, the GCC nations primarily rely on imports to meet their food requirements; in 2010, food imports in the GCC region accounted for more than 70 per cent of its total food requirement. With limited food production capabilities, the governments of the GCC are increasingly focusing on developing long-term relations with food producing nations globally. Table 1: GCC food import estimates (USD billion) Source: EIU (E - estimates) Government initiatives have focused on ensuring food security through various means. The ongoing trend for investments in local food producers and manufacturers allows for the integration of the latest technologies, helping to partially displace reliance of food imports and keeping in line with food security strategies for the region. The sector also aims to let local players grow strong brands

starting at home to become international brands and hence expand the food export potential.

Table 2

GCC food consumption pattern, by category - 2010	
Cereals	46.30%
Vegetables	13.00%
Fruits	13%
Milk	12.90%
Meat	6.60%
Others	8.20%



Source: Arab Agricultural Statistics Yearbook, Alpen Capital

Water Resource

Water, of course, is the key to agriculture in Saudi Arabia. The Kingdom has successfully implemented a multifaceted program to provide the vast supplies of water necessary to achieve the tremendous growth of the agricultural sector. These efforts collectively have helped transform vast tracts of the desert into fertile farmland. Land under cultivation, less than 400,000 acres in 1976, reached millions of acres by the 21st century.

But still water availability is very low. Farming uses 85% of all water use in the country. Even so, water in farming is still at an early stage and Saudi Arabia is at risk of extreme water usage, affecting future farming-based performance. This is partly because farming-based businesses do not need to pay for their water. The number of uncontrolled bore wells for farming-based purposes raises the risks of using up/reducing these mostly non-renewable, provide 84% of the water supply mostly for farm-related. Dams have been built to improve (as much as possible) the use of seasonal floods. Also, there are different facilities for treating runoff water to become good for farming. Water investments are the very important thing for the future development of farming. In order to avoid further using, there should be balance between (salt removal), wastewater treatment and underground water-storage related storage recovery. An expanding source of water is the use of recycled water. The Kingdom aims to recycle as much as 40 percent of the water

used for domestic purposes in urban areas. To this end, recycling plants have been built in Riyadh, Jeddah and other major urban industrial centers. Recycled water is used for irrigation of farm fields and urban parks.ⁱⁱ

Agro entrepreneurs

What is the difference between agro-industry and agri industry?

Both agro and agri are the same. People usually use agri when it comes to industry or commercial. The term agro used when it comes to science or technology.

Saudi Arabia in Agriculture

Currently, Saudi Arabia exports wheat, dates, dairy products, eggs, fish, poultry, fruits, vegetables and flowers to markets around the world. Dates, once a staple of the Saudi diet, are now mainly grown for global humanitarian support.

The Ministry of Agriculture is mainly accountable for agricultural policy. Other government agencies include the Saudi Arabian Agricultural Bank (SAAB), which disburses grants and grants interest-free loans; and the Grain Silos and Flourmills Organization, which purchases and stores wheat, constructs flourmills, and produces animal feed. The government also offers land distribution and reclamation programs and funds research projects.

The private sector has played a major role in the Kingdom's agricultural development. This is mostly due to government programs that offered long-term, interest-free loans, technical and support services, and incentives such as free seeds and fertilizers, low-cost water, fuel and electricity, and duty-free imports of raw materials and machinery. There has been a remarkable growth in the production of basic foods. Saudi Arabia is now completely self-sufficient in a number of foodstuffs, including meat, milk and eggs. The Kingdom has, however, stepped up fruit and vegetable production, by improving both agricultural techniques and the roads that link farmers with urban consumers. Saudi Arabia is a major exporter of fruits and vegetables to its neighbors. Among its most productive crops are watermelon, grapes, citrus fruits, onions, squash and tomatoes. At Jizan in the country's well-watered southwest, the Al-Hikmah Research Station is producing tropical fruits including pineapples, paw-paws, bananas, mangoes and guavas. This agricultural transformation has altered the country's traditional diet, supplying a diversity of local foods unimaginable a few generations ago. Dates are no longer the vital staple for Saudi Arabians that they were in the past, although they still constitute an important supplementary food. Much of the annual production of dates, estimated at around half a million tons and comprising some 450 different kinds, is used as international humanitarian aid.

Market Conditions and Challenges for Agri-entrepreneurs

Saudi Arabia bids a business friendly atmosphere compared to other MENA states. In the World Bank 2015 Ease of Doing Business report it ranks 49th out of 183 countries with only the U.A.E. scoring better out of the other MENA states.ⁱⁱⁱ It is one of the few

countries that demand no fee for starting a business. Regulation regarding construction permits is also relatively business friendly. The country is furthermore relatively open to trade. It has the lowest average weighted tariff rates in the MENA region.

As part of its 'Saudiization' strategy, the government is seeking to improve the situation of Saudis on the labor market. Saudi Arabia has a well-regulated, securely governed banking system. It is based on the Islamic banking system of Shari'ah, that ensures that return on investments must be based on ownership and shared profit (or loss). Partnerships and acceptable sales transactions are therefore commonplace. Microfinance schemes are expanding in Saudi Arabia, reaching out for instance to women in entrepreneurship, many of whom are active in the food sector, and includes coaching and guidance.^{iv} With a large and growing population, market potential in Saudi Arabia is larger than the MENA average. The expenditure habits of the middle and upper classes are attractive for the food industry. The poorest Saudis are supported by welfare programs, which are a segment of the local food chain that foreign investors could be part of. Saudi Arabia has a large consumer market. It is the second largest Arab state in terms of size (after Algeria) and has currently more than 29 million citizens including 9 million legal immigrants.^v The population is expected to rise in the future, although the growth rate is expected to decrease. Since over half of the population is under 25 years of age, and many young people will be entering the workplace over the coming years, job creation has become a top priority for the government.

Over recent decades, income has been rising fast and consistently for middle and upper class Saudis.^{vi} Individual tax rates are zero, which gives rise to high levels of consumer spending power. Due to its large oil reserves, Saudi Arabia has presided over stable economic growth. Although dropping oil prices are pressuring the economy, the country presides over a large fiscal buffer to weather the storm.^{vii} Yet inequality remains large. Even if there is little official data about poverty and hunger, some reports indicate that over a quarter of the native Saudi population lives in poverty.^{viii} Population growth and (youth) unemployment could further increase the number of poor people in the country. As the food-processing sector and the Agro Business may expand to meet the demand from the growing and urban population^{ix}, this sector is recognized as being very relevant in providing Saudi jobs. However, sustained subsidies and social welfare programs have helped to shape a generation that is critical of accepting jobs in agriculture. Matching human resources with the available jobs is a key concern. Important production sectors to the Saudi food economy include large sectors such as poultry and greenhouse horticulture. Foreign investments are needed to expand production in a sustainable manner, thus reducing the pressure on water consumption for a growing population especially in the face of climate change. Moreover, by building a strong agriculture and food sector, Saudi Arabia aims to diversify its economy beyond the petrochemical industry.

Education and technological developments

The Saudi Arabian regime has a variety of policies in place to stimulate technology transfers and facilitate technology intensive businesses. Due to a growing population and the increasing domestic demand, the government is looking for ways to

increased domestic food production. Investments in agricultural technologies focus on large scale production systems, and outstanding agricultural knowledge and innovation systems are needed to fulfill these ambitions.

Water efficiency has been a main focus of government efforts over the years. Current developments in agriculture focus on efficient and sustainable irrigation systems that include innovative water treatment solutions. A wheat phase-out policy, launched in 2008, intends to limit wheat production, as it is a water intensive crop. Other water intensive production processes, such as cattle farming are also looking at ways to improve water efficiency. Phase-out is also considered for water intensive feed crops, such as alfalfa, and dates. As the country still needs a vast amount of wheat, grains and rice for food and feed, imports are rising fast. To expand its production, Saudi companies are also investing abroad, in countries such as Ethiopia. Saudi companies are also investing in storage silos, as the Saudi government aims at building up one year of grain reserves.^x Contributing to inclusive growth by the agribusiness sector is influenced by current environmental and labor regulation. Reserves in agribusiness in Saudi Arabia can benefit to grow more products for the increasing population and provide system resolutions for an extremely water scarce country. Investments in the agricultural sector and food processing industry aid to fortify the economy in sectors outside the oil production and refinery sectors. By contributing to food security and economic progress, funds in agriculture and food may have an optimistic impression on the stability of the country.

Possible effect of agricultural investments

Economic development:

- Agro- and food business might offer Saudi jobs.
- Foreign funds help to shape a groundbreaking and sustainable agro-food sector to be strong to climate change.
- Diversify the economy.

Social development

- Foreign funds in Saudi Arabia pay to food security.
- Food security is the top priority for Saudi government. High demand for food needed to decrease and total food import dependency will also decrease.
- Food processing industry could provide meal solutions to tackle obesity.
- Increase in demand for innovative food processing industry.
- More business opportunities will be there cooperating with Saudi firms in foreign food production.
- Introduction of state-of-the-art sustainable agricultural practices to increase crop yield through better soil fertility, water and nutrient management.^{xi}

Date Palm as Biomass Resource

Date palm is one of the principal agricultural products in the dry and semi-arid region of the world, particularly Middle East and North Africa (MENA) region. There are more

than 120 million date palm trees worldwide yielding many million tons of dates per year, apart from secondary goods including palm midribs, leaves, stems, fronds and coir. The Arab world has more than 84 million date palm trees with the majority in Egypt, Iraq, Saudi Arabia, Iran, Algeria, Morocco, Tunisia and United Arab Emirates.

Saudi Arabia has more than 23 million date palm trees, which yield about 1 million tons of dates per year. Date palm trees yield huge amount of agricultural wastes in the form of dry leaves, stems, pits, seeds etc. A typical date tree can generate as much as 20 kilograms of dry leaves per annum while date pits account for almost 10 percent of date fruits. Some studies have reported that Saudi Arabia alone generates more than 200,000 tons of date palm biomass each year.

Date palm is considered a renewable natural resource (Salman Zafar – 2018)^{xii} because it can be replaced in a relatively short period of time. It takes 4 to 8 years for date palms to bear fruit after planting, and 7 to 10 years to produce viable yields for commercial harvest. Usually date palm wastes are burned in farms or disposed in landfills which cause environmental pollution in dates-producing nations. The major constituents of date palm biomass are cellulose, hemicelluloses and lignin. In addition, date palm has high volatile solids content and low moisture content. These factors make date biomass an excellent waste-to-energy resource. A wide range of thermal and biochemical technologies exists to convert the energy stored in date palm biomass to useful forms of energy. The low moisture content in palm wastes makes it well-suited to thermochemical conversion technologies like combustion, gasification and pyrolysis which may yield steam, syngas, bio oil etc. On the other hand, the high volatile solids content in date palm biomass indicates its potential towards biogas production in anaerobic digestion plants, possibly by digestion with sewage sludge, animal wastes and/or food wastes. The cellulosic content in date palm wastes can be transformed into biofuel (bioethanol) by making use of the fermentation process. The highly organic nature of date palm biomass makes it highly suitable for compost production which can be used to replace chemical fertilizers in date palm plantations. Thus, abundance of date palm trees in Saudi Arabia can catalyze the development of biomass and biofuels sector in the region.

Agro Business may develop Social Equity to Youth and Women

The youth and women of Saudi are now targeting the unemployment problem in the kingdom. Many graduates entering job market faces 30 percent of Saudi youth unemployed. (Stephen Downes – May 2017)^{xiii} Agro Business will provide new route for the youth and women of Saudi Arabia. Today, Saudi Arabia exports wheat, dates, dairy products, eggs, fish, poultry, fruits, vegetables and flowers to markets around the world. Dates, once a staple of the Saudi diet, are now mainly grown for global humanitarian aid. The Ministry of Agriculture is primarily responsible for agricultural policy.^{xiv} Desert agriculture is the farming of crops well-suited for arid conditions, such as sorghum. Desert agroforestry is the growing of crops with the environmental support of trees in desert or arid areas. Increase in food in desert regions due to the successful growth of specific crops that are well-suited to the dry and hot environment. Other crops would require many more resources and much more maintenance in order to just survive in such

a climate. The other is the prevention of desertification, which is defined by “Desertification” (2006) as the destruction of animal and plant life in arid areas due to human actions, by the active vegetation of arid lands.

Jatropha

Jatropha is a plant rising in subtropic climates and very modest that concerns the water requirement. It yields fruits containing a high degree of oil which is not consumable by men or animals. Research and trials have proven that the nuts are ideal for the production of Bio fuels. Lufthansa German Airlines have used kerosene blended with bio-fuels on basis of Jatropha. Research has furthermore shown that the plant can be grown in steppe or desert areas. In southern Egypt plantations have been grown watered by the waste water of a nearby town. One of the benefits of Jatropha over other plants suitable for the production of Bio-fuels is besides the high oil content that it cannot serve as nutrition. The often heard critics “food into fuel” does not apply.

It might be worthwhile to consider the cultivated growth of Jatropha in the Kingdom of Saudi Arabia. Even if due to low oil-cost in the Kingdom of Saudi Arabia the production of Bio-fuels does not seem to be feasible at the first glance, a Jatropha farming could be worthwhile for following reasons:

- More and more nations call the blending of fossil fuel with bio-fuels
- International airlines are progressively forced to prove that they are using kerosene blended with bio-fuels
- The trade with environment certificates has increased increasing economic standing.

Fisheries

The Ministry of Environment, Water and Agriculture is trying to activate and support the fisheries sector, as it is expected that 600,000 tons of fish and prawns will be provided yearly by 2029. Fisheries sector ought to create 400,000 jobs. Latest statistics said that there are more than 250 fishery projects at the present in the Kingdom. In view of the high consumption, the ministry wants to increase the supply of marine products to 300,000 tons per year. Sea Cucumber harvesting is also currently in business. Saudi Arabia and the three main sea cucumber fishing sites: Al-Wajh, Thowal and the Farasan Islands.^{xv} Fish production through traditional off-shore fishing has been constantly on the increase, the Kingdom is exploring ways of further increasing its catch and encouraging greater private investment. One of the new areas in which the private sector is investing with government support is aquaculture. The number of fish farms, either using pens in the sea or tanks onshore, has been increasing steadily. Most are located along Saudi Arabia's Red Sea coast. Shrimp farming has been particularly successful.

Conclusion:

The agriculture of Saudi Arabia has drastically deteriorated over the past decade. Although Saudi Arabia is widely thought of as a desert, it has regions where the climate

has favored agriculture. The government, in particular, has aided with this process by converting large areas of desert into agricultural fields.^{xvi} By implementing major irrigation projects and adopting large-scale mechanization, this has progressed in developing agriculture in the country, adding previously barren areas to the stock of cultivatable land.^{xvii} Large quantities of crop residues are also produced annually in the region, and are vastly underutilized. Current farming practice is usually to plough these residues back into the soil, or they are burnt, left to decompose, or grazed by cattle. These residues could be processed into liquid fuels or thermally processed to produce electricity and heat in rural areas. Energy crops, such as *Jatropha*, can also be successfully grown in arid regions for biodiesel production. Infact, *Jatropha* is already grown at limited scale in some Middle East countries and tremendous potential exists for its commercial exploitation. Saudi Agriculture also exhibit latest technologies gathers leading local and international companies; machinery and services that meet the needs of the agricultural sector. These latest technology and machineries should be trained and awareness to be given to youth agropreneurs. The youth agropreneurs should also focus on organic farming which is the present attraction worldwide. There are ample of opportunities available to youth in agro business and agro related business that can concentrated. A good programme or training should be introduced to give complete awareness towards agro opportunities availability Middle East and especially in Saudi Arabia. From vertical farming to rooftop gardening, there are plenty of agro developments put in practice in the Middle East could be contributed by youth.

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