The Agriculture Sector in the Sultanate of Oman

Position: the Sultanate of Oman occupies the eastern corner of the Arabian Peninsula, stretching more than 1 700 km from the Strait of Hormuz in the north to the frontiers of Yemen in the south. The Musandam Peninsula, the most northern point of Oman is separated from the rest of the country by Fujaira, which is one of the United Arab Emirates (Figure 1). The country is located between latitudes 16°40’ N and 26° 20’ N and longitude 51° E and 59°40’ E. It occupies total area of about 309 500 sq. km, of which mountains, deserts and coastal plains represent 16%, 81% and 3%, respectively.

Figure 1. Map of Oman

Physiographic regions: it can be divided into the following physiographic regions: i) the whole coastal plain: the most important parts are the Batinah Plain in the north, which is the principal agricultural area, and the Salalah Plain in the south; ii) the mountain ranges: Jebel Al Akhdar run in the north close to the Batinah Plain with a peak at 3 000 meters and in the extreme southern part of the country, with peaks from 1 000 to 2 000 meters; iii) the internal regions: which lay between the coastal plain and the mountains in the north and south and consist of several plains with elevations not exceeding 500 meters.

Climate: the climate varies from arid in the interior areas, to humid in coastal areas and to tropical in the southern parts of the country with a temperature range from below zero (in Jebel Akhdar and Jebel Shams) to 50° C in summer in the desert. The average annual rainfall is about 100 mm, mostly distributed between November and February, except in the Dhofar governorate where there is monsoon rainfall (200-250 mm) during kharif (July-September) period.

Human Population and Trends: the current estimated population of Oman is 3 295 000 million in 2011 (2 013 000 million Omanis and 1 282 000 expatriates) according to Statistical Year Book 2012 with a growth rate of 2.04 %. Population density is greatest in Muscat (30.46 %) followed by Al Batinah (24.83 %). 28.4% of the population is related to agriculture (MAF . 2005a, Agriculture Census 2004/2005, Sultanate of Oman). Income, education and health indices have widely increased as compared to the past decade, reflecting a balanced progress across the different governorates with almost equal improvement in life expectancy and education for men and women.

Agriculture Sector: agriculture plays an important role in the country. The total cultivated area is about 75 977 ha of which 60% is located in the coastal areas (according to a MAF Report published in 2011). Farming systems include production of crops namely dates and fruits, vegetables, fodder and field crops, as well as livestock such as cattle, sheep, goats, and poultry. Farm holdings vary from less than 0.4 ha to more than 84 ha. Those less than 1.26 ha are about 11% of total farm holdings; those ranging between 1.26 and 12.60 ha are 65%, while those greater than 12.6 ha are about 23.8%.

Agriculture Policy: agriculture and fisheries products are among the main non-oil commodities that account for nearly 11.70 % of Oman non-oil exports in 2011 (Statistical Year Book, 2011). The agricultural products that are exported include mainly dried and fresh dates, dried limes, fresh fruits, and vegetables. Over the past years, the government has made concerted efforts to improve productivity in agriculture through modern irrigation techniques and crop husbandry practices. As a result, during the last decade the production of dates has increased by 30%, while yields of tomatoes, potatoes, and alfalfa have doubled. With the population increasing annually at a rate of more than 3.28 %, there is a need for increasing food production and new strategies are being explored for achieving sustainable food security.

Agro-ecological regions of Oman: two main agro-climatic zones are recognized in Oman based on parameters which influence potential of land, water resources and cropping patterns:

- Northern Oman including Batinah Coastal plain, Interior Oman and Dahira plains, Jebel Akhdar and Sharqiya plains.
- Southern Oman, Dhofar including Salalah plain, Dhofar Jebel and Najd.
Agricultural Commodities: a wide range of crops is cultivated in the Sultanate. The permanent tree crops, particularly dates, lime and mango, collectively occupy the largest part of the cultivated land followed by perennial forage crops such as alfalfa, Rhodesgrass, elephant grass etc., field crops like wheat, barley, oats, maize, sorghum, fenugreek, fababean, cowpea, chickpea etc., and vegetables like cucumber, garlic, onion, tomato, watermelon etc. (Table 1). Agricultural crops are grown mostly in Batinah, Al’Dakhliyah, Al’Dhahira and Buraimi, Sharqiya, Musandam and Dhofar governorates. All the crops are irrigated in Oman except in Musandam governorate where crops like wheat and barley grow under rains. Irrigation is by flood, drip, bubbler, or sprinklers.

Agriculture Situation: since 1970s the area under irrigation increased from about 28 000 ha to 63 632 ha in 2005 (MAF 2005a, Agriculture Census 2004/2005, Sultanate of Oman). Although 2.2 million ha are considered suitable for agriculture, groundwater appears not sufficient for most areas. At present, groundwater depletion is taking place, especially in coastal areas, leading to seawater intrusion and deterioration in the water quality.

The Ministry of Agriculture and Fisheries (MAF) has made efforts since 1990s to introduce modern irrigation techniques. In order to encourage farmers to use them, MAF had given a financial subsidy in irrigation systems varying between 75 % for small-scale schemes (less than 4.2 ha), 50% for medium-scale schemes and 25% for large-scale schemes (more than 21 ha). Despite these efforts, the traditional flood system still remains the most common irrigation technique, which accounts to about 80%.

National Seed Activities: in Sultanate of Oman, seed production was started in 1979 under the direct supervision of agricultural research stations and restricted to Al’Dakhliya governorate. However, the program was later expanded to cover Al’Sharqiya and Al’Dharhira governorates and is now under the direct supervision of the extension service. The Government undertakes the responsibility of seed production, particularly of some important crops such as wheat and barley.

Most farmers produce their own alfalfa. Generally, seed is harvested from alfalfa crop of 4-5 years. This practice of harvesting seed from old stands applies a strong selection pressure in favor of those plants, which have survived several years of cutting. It will tend to ensure that these important survival characteristics are preserved and enhanced in successive multiplication. This may explain in part the widespread reputation of the alfalfa variety known as ‘Omani’ in the most part of Oman.

As per vegetables and forage crops, there are no local seed production programs running either by the Government or by the private sector. Several international seed companies have branches in the country in association with local seed companies or agents. These companies import seed of promising varieties from USA, Australia, Arab, Asian, African and European countries and supply the seed directly to the farmers or through the Government. However, some farmers produce seeds of local cultivars of vegetables like onion, garlic, carrot, cucumber, muskmelon, and sweet potato, and propagating materials of tree crops like date palm, mango, acid lime and other citrus species. In fruit crops, the Ministry of Agriculture and Fisheries has established nurseries in the different parts of the country, undertaking the production of seedlings of date palm, mango, acid lime, and other citrus species and crops. In addition, private nurseries are also engaged in selling propagated materials of some selected fruit crops.

Table 1. Area of different groups of crops in Oman (MAF Report, 2011)

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<thead>
<tr>
<th>CROPS</th>
<th>AREA (HA)</th>
<th>% OF TOTAL AREA</th>
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<tbody>
<tr>
<td>Fruit Crops including dates</td>
<td>39 096.22</td>
<td>51.46</td>
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<tr>
<td>Field Crops including sugarcane</td>
<td>10 096.64</td>
<td>13.29</td>
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<tr>
<td>Fodder Crops (Perennial &amp; Annual)</td>
<td>20 489.08</td>
<td>26.97</td>
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<tr>
<td>Vegetable Crops</td>
<td>6 294.96</td>
<td>8.28</td>
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<td>Total</td>
<td>75 976.90</td>
<td>100.00</td>
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