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Assessment of the food control systems in the Sultanate of Oman



Moza A. Al-Busaidi*, David J. Jukes

Department of Food and Nutritional Sciences, The University of Reading, Whiteknights, Reading RG6 6AP, UK

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ABSTRACT

National food control systems are vital tools in governing the safety and quality of food intended for human consumption. This study of the Omani system was conducted to evaluate the effectiveness of the current food controls in place for protecting, in particular, the public health from emerging biological and chemical hazards. In response to this situation, a survey was undertaken within the different food safety authorities in Oman to examine the different elements of the national food control systems in terms of their existing food control management, food legislation, food inspection, food analysis laboratories and information, education and communications. Officials from the different authorities were interviewed and results were captured in prepared questionnaires. Overall examinations of the challenges, strength and weakness of the existing system have been highlighted. The findings of the study indicate significant progress is being made and the creation by the government of a national Centre for Food Safety and Quality is a significant positive step.

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1. Introduction

Food safety and quality have become essential components for the protection of public health, economic development and most of all for food security. With the proper control and management of food safety and quality throughout the farm to plate continuum, the wholesome supply of food products and consumer protection from mislabelled or adulterated food can be enhanced. However, food safety has become a major concern world-wide due to the increased incidence of foodborne diseases affecting millions of people every year with many dying as a result.

The World Health Organization WHO (2009) has reported that more than 200 diseases can be spread by contaminated food or water with the level of foodborne diseases being amplified by increased international trade in food and population mobility. Foodborne and waterborne diseases can be acute or life-long, ranging from simple symptoms (e.g. diarrhoea) to very chronic diseases (e.g. kidney failure or different type of cancers). Data on the amount of disease is particularly difficult to determine in developing countries due to insufficient surveillance and poor reporting systems. The WHO has however estimated that foodborne and waterborne diseases combined kill about 2.2 million people annually of which 1.9 million are children (WHO, 2010b).

E-mail addresses: M.A.A.Al-Busaidi@reading.ac.uk, moza_albusaidi@yahoo.com (M.A. Al-Busaidi)

Despite the advances in science and technology foodborne illness is still a continuing threat due to the complexity of the food system from the production of raw materials through to the point of consumption.

Whilst microbiological causes of foodborne disease are often seen as the most critical, contamination with toxic chemicals is another source of potential disease. Environmental contaminants, residues of both pesticides and veterinary drugs, chemicals leaching from packaging and process contaminants are just some examples of the wide range of chemicals which may pose a risk.

All of these issues impact on societies around the world and place increased pressure on governments to provide effective protection for their country's citizens. Effective national food control systems (NFCS) are seen as important. Guidance on the key components of NFCS has been defined by international bodies. In particular the FAO and WHO have jointly published guidance on the strengthening of national food control systems (FAO/WHO. (2003). In addition, more recently, the international Codex Alimentarius Commission has adopted "Principles and Guidelines for National Food Control Systems" (Codex Alimentarius Commission, 2013). Assessing compliance with these documents can assist in the development of improved NFCS both within a country and enables good practice developed in one country to be shared and adopted elsewhere. With this in mind, in this paper we have undertaken a review of the NFCS in Oman including both the national developments and the relationship between these and the various regional and international developments.

^{*} Corresponding author.

The scarcity of arable land and water limits agriculture production in Oman as well as other countries in the region. With an economy dominated by the oil and gas industries and a rising demand for food, Oman has relied on food imports to meet the domestic requirement. The globalization of the food supply and the rapid increase in the importation of food from many countries has increased the risk of foodborne diseases from chemical and microbiological contaminants. Imported foods do not necessarily represent an increased risk of poor food safety and quality. However the increased difficulty in effectively assessing and controlling large volumes of imported foods does complicate food controls when the authorities do not have access to the full supply chain.

An effective national food control system is essential to protect the wellbeing and safety of consumers and to assure the safety and quality of their products. Our objective is to provide a preliminary assessment of the food safety control in Oman in relation to the five core elements of a national food safety system proposed by the FAO and WHO (FAO, 2006; FAO/WHO, 2003): food control management, food legislation, food inspection and surveillance, official food control laboratories, food safety and quality information, education and communication.

2. Background

2.1. An overview of the country

The Sultanate of Oman is situated on the eastern edge of the Arabian Peninsula with a 3165 km long coastline extending from the Musandam Peninsula at the entrance of the Arabian Gulf in the north to the Republic of Yemen in the southwest. It has a total area of 309,500 km² and bordered by the United Arab Emirates (UAE) to the northwest and Saudi Arabia to the west. It lies on three major water bodies; Arabian Gulf, Sea of Oman and the Arabian Sea.

In October 2011 the Sultanate of Oman was divided administratively into eleven governorates (Muhafathat): Musandam, North and South Al-Batinah, Muscat, North and South Al-Sharqiyah, Al-Dakhiliya, Al-Wusta, Al-Buraimi, Al-Dhahirah, and Dhofar. Within these governorates, Oman is sub-divided into 61 provinces (wilayat). The city of Muscat in the Governorate of Muscat is the capital of the country.

The Basic Statute of the State is the constitution of the Omani government that provides the legal framework for the implementation of legislation and other government policies. The Basic Statute contains provisions covering the Head of State, the Council of Ministers and the judiciary, as well as the specialised councils. The Oman Government structure is a bicameral system consisting of the Council of Ministers and the Council Oman (Majlis Oman). The Council Oman combines a Consultative Council (Majlis a'Shura), whose members are elected by Omani citizens every four years, and a State Council (the Majlis Al Dawla), whose members are appointed by the Sultan. Recent amendments to the Basic Statute have increased the independence of the judiciary and strengthened the parliamentary institutions. The changes have provided the State Council and the Consultative Council legislative and regulatory powers enabling them the right to amend or approve all laws originating from the Council of Ministers before being submitted to His Majesty for promulgation (Ministry of Information, 2013).

In 2010 the total population was 2.8 million with 2.0 million (70%) Omanis, and 0.8 million (30%) expatriate. Population density is highest in the Governorate of Muscat and Al-Batinah (776 and 772 thousands/km² respectively) and lowest in the Governorate of Musandan (31 thousand/km²) (NCSI, 2013).

Oman is a member of the Gulf Cooperation Council (GCC), a political and economic cooperation es lished in May 1981 by

joining with five other countries bordering the Arabian Gulf (Bahrain, Kuwait, Qatar, Saudi Arabia and the United Arab Emirates). The GCC aims to unify the six member states by means of co-ordination, integration and inter-connection in all fields (GCC, 2012). The GCC countries' imports valued around \$29 billion in 2012 with an expectation to double by 2020 (SustainableBusiness.com, 2013).

2.2. Economy

The country's economy is dominated by the oil and natural gas industries with their production accounting for 51% of the Gross Domestic Product (GDP). Industry and services contribute a further 48% leaving agriculture and fisheries contributing the remaining 1% (NCSI, 2013). However agriculture has been a vital sector in the country although limited by geography to only parts of the country. The main crops are date palms, accounting for around half the total area under cultivation, and coconut palms. Fisheries have been an integral part of the Omani culture for many centuries providing employment and nourishment for the Omani population. With its long coastline, Oman is one of the leading seafood producing countries in the region.

2.3. OMAN - Vision 2020

In 1996 an "Oman 2020" vision for the national economy was approved providing a long-term strategic development plan until 2020. It is committed to developing and maintaining the Sultanate's economic growth on a carefully studied basis as well as social welfare (Ministry of Information, 2010/2011). The Eighth Five-year Development Plan (2011–2015) is the fourth stage of the 2020 vision and food security is now a very important element. This element has been one of the principal problems for GCC countries due to the complete dependency on importation of basic foodstuffs with the region being one of the smallest producers of food in the world. Around 33 million tons of foods are imported each year by GCC countries. It has been estimated that more than 90% of the GCC countries' food and beverage requirements are imported (Business Intelligence Middle East, 2006). Fig. 1 highlights the non-oil imports, exports and re-export of different food commodities in Oman in 2012 (NCSI, 2013).

In order to reduce the dependency on imports, the Eighth Fiveyear Development Plan has addressed various agricultural, livestock and fisheries strategic programmes and projects. These aim to develop these sectors in order to boost the annual national economic growth and increase their role in the GDP. In the agriculture sector, schemes include a national date palm strategic project, promoting the reduction of pesticide use, introduction of modern technologies and irrigation systems. As for the livestock, awareness programmes have been set out targeting small producers and stock breeders to increase their contribution to the total economy. For fisheries the focus has been on the management of aquatic resources and ensuring they are adequately regulated and monitored to ensure their sustainability. An industrial fisheries estate is to be constructed in the fishing harbour of the of Duqm province in Al-Wusta governorate. The aim is to boost the production of value added seafood products in a well-equipped unit and to make this harbour the main station for fishing vessels around the Indian Ocean (Ministry of Information, 2010/2011).

For the Sultanate, food quality and safety have become major concerns. Although these concerns include domestically produced foods, with the high level of imports, they have tended to focus on imported foods and the need to ensure their safety and quality. In 2007 the GCC countries established a 'common market' designed to provide a single market for the GCC community with no barriers for

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