

Chapter 10

Importance of Biotechnology in the Development of Functional Foods in Emerging Countries: The Case of Chile

Carolina Alejandra Oliu

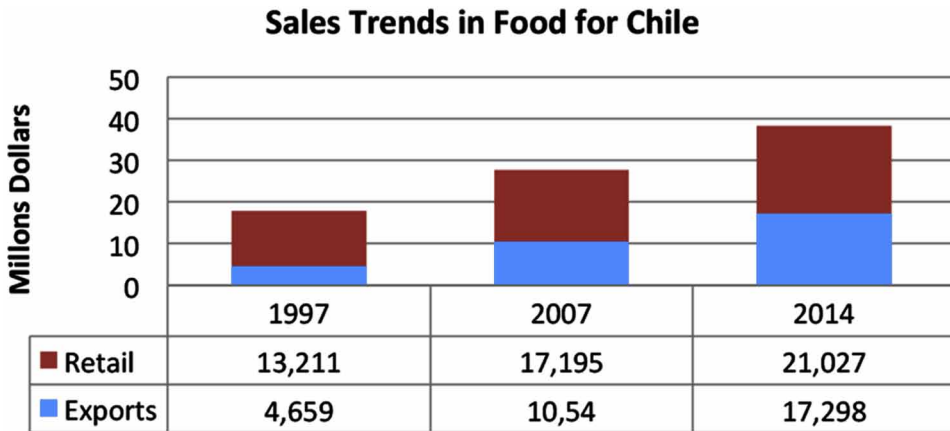
Institute of Innovation Based on Science, University of Talca, Chile

ABSTRACT

This chapter seeks to highlight the qualities of functional foods, in relation to those called traditional foods and, from this perspective, the contribution that the use of techniques based on biotechnology can provide to increase the quality of foods, while seeking to reduce diseases derived from a bad or insufficient nutrition in the population. To that end, a brief overview has been prepared on the diverse categories of healthy foods, before delving deeper into the definitions of functional foods. This paper addresses the existing relation and impact of using biotechnology for processing them and, at the same time, it provides a short description of the potential market for functional foods in Chile.

DOI: 10.4018/978-1-5225-1040-6.ch010

Figure 1. Sales trends in food for Chile



INTRODUCTION

Chile is an emerging country that has historically based its economy on mining and food. This last sector has had a more sustained growth over time. According to the Central Bank of Chile, in 2014, food accounted for 18% of the GDP, constituting 25% of the total exports of the country. It has more than 1,500 export products, accounting for more than 800,000 jobs and, as shown in Figure 1, an evolution in sales which went from USD \$17,870,000 in 1997 to \$38,325,000 in 2014. It is worth noting that Chile is positioned within the top ten exporters of food in the world.

For many years, Chile's economic development strategy has focused on areas with greatest potential in natural resources, such as mining and the food industry, among other things due to its climatic advantages and geopolitical situation. However, in recent decades, other areas with high growth potential, investment opportunities and international competitiveness have identified, such as the generation of renewable energy, global services and biotechnology (CIEChile, 2013).

Chile, beyond basing its economy on natural resources, began to glimpse more explicit efforts to promote the use of biotechnology since 2003 (Government of Chile), when the "National Commission for the Development of Biotechnology" stated that the purpose of their biotechnology policy was: "...promoting the development and application of biotechnology, especially in the productive sectors based on natural resources, in order to increase the welfare and quality of life for all Chileans and thereby contribute to the generation of wealth in the country, ensuring the protection of health and environmental sustainability". This statement reaffirms

11 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/importance-of-biotechnology-in-the-development-of-functional-foods-in-emerging-countries/169521

Related Content

Recent Advances in Synthesis and Biomedical Applications of Magnetic Nanoparticles: Magnetic Nanoparticles for Biomedical Applications

Irshad Ahmad Wani (2018). *Biomedical Engineering: Concepts, Methodologies, Tools, and Applications* (pp. 1424-1447).

www.irma-international.org/chapter/recent-advances-in-synthesis-and-biomedical-applications-of-magnetic-nanoparticles/186734

Use of Telemedicine Systems and Devices for Patient Monitoring

Dionisia Damigou (2009). *Medical Informatics: Concepts, Methodologies, Tools, and Applications* (pp. 733-739).

www.irma-international.org/chapter/use-telemedicine-systems-devices-patient/26253

Potential Evaluation of Electro Mechano Gram (EMG) for Osteoporosis Detection

Shashank Srivastava, Shipra Prakash, Suresh Bhalla, Alok Madan, Sunil Sharma, H. S. Chhabra and Jitesh S. Manghwani (2022). *International Journal of Biomedical and Clinical Engineering* (pp. 1-12).

www.irma-international.org/article/potential-evaluation-of-electro-mechano-gram-emg-for-osteoporosis-detection/309411

Pulse Spectrophotometric Determination of Plasma Bilirubin in Newborns

Erik Michel, Andreas Entenmann and Miriam Michel (2016). *International Journal of Biomedical and Clinical Engineering* (pp. 21-30).

www.irma-international.org/article/pulse-spectrophotometric-determination-of-plasma-bilirubin-in-newborns/145164

Biomedical Sensors

Sverre Grimnes and Jan Olav Høgetveit (2012). *Handbook of Research on Biomedical Engineering Education and Advanced Bioengineering Learning: Interdisciplinary Concepts* (pp. 356-436).

www.irma-international.org/chapter/biomedical-sensors/63397