

2020 Market Analysis of International Conference on Food Microbiology and Food Market

Permal Deo

Professor, Department of Food Safety, University of South Australia, Australia, E-mail: Permal.Deo@unisa.edu.au

Introduction

The 5th International Conference on Food Microbiology and Food Market Conference to be held at Vancouver, Canada during May 04-05, 2020 hosted by Conference Series through the theme "Accentuating New Advances in [Food Market for Healthy living](#)", [conference](#) will explore the advances in Food Microbiology, food safety etc. It will be a premier event that brings together a unique and International mix of experts, researchers and decision makers both from academia and industry across the globe to exchange their knowledge, experience and research innovations to build a world food security & sustainability meet. We also Publish 700+ Open access journals which contain over 30000 eminent personalities, reputed scientists as editorial board members and Organizes 600+ Conferences every year across USA, Europe & Asia with support from 1000 more scientific societies.

This meet enables a common platform for the participants to discuss their research in order to establish a scientific network between the academia and industry leading to foster collaboration and to evaluate the emerging issues, technologies and innovations that leads to explore new possibilities and improving the existed opportunities.

Importance of Food Microbiology and Food Market Conference (Globally, Continent Wise (Europe, America, Asia pacific, and Middle East)

1. **Globally:** Worldwide, the food supply available to people depends on a variety of environmental, technical, and socio-political factors, the relative importance of which have varied considerably in time as well as geographically. Environmental factors have governed food production and availability throughout history, and this remains so for many societies. However, in a world where food is abundant as never before, food supply is extremely vulnerable to economic and political interests, as well as technical factors, such as transportation and communications. Food prices are set at the major stock exchange institutions in North America, Europe, and Japan. In competing for the hegemony of the global food market, the United States, the world's main food exporter, has been engaged in "food wars" with Japan

and the European Union. International organizations, such as the recently formed WTO (World Trade Organization), have been created to defuse these conflicts, as well as to balance the "market distortions" that affect less powerful nations. The global food market is dominated by the most affluent countries, which, on average, have controlled almost 70 per cent of the total value of imports and over 62 per cent of the total value of exports of all agricultural products in the world since 1961. During the last quarter of the twentieth century, these countries have been reducing the value of their imports while expanding the value of their exports. Food imports by these countries typically concentrate on specialized agricultural items, such as tropical fruits and selected vegetables, as well as coffee, tobacco, sugar, and tea, none of which is a staple in its place of origin. In order to meet the domestic demand for staples, many of the exporting countries of such products have to import large quantities of basic staples in exchange.

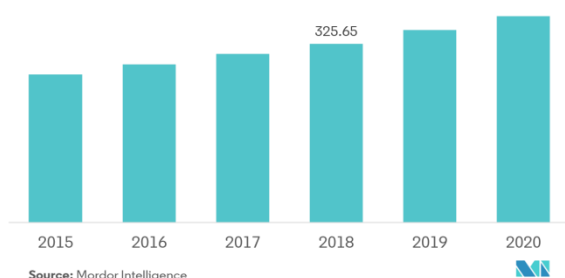
2. **North-America Region:** The U.S. market for [Food Microbiology](#) and food market totalled nearly \$56.4 billion in 2014. This market is projected to approach \$61.4 billion in 2015 and \$69.4 billion by 2020, registering a compound annual growth rate (CAGR) of 2.5% through 2021.

3. **Europe:** Europe food safety testing market is forecasted to reach USD 6.16 billion by 2024 growing at a CAGR of 7.5% during the forecast period (2019-2024).

- Food safety is a credence attribute as it cannot be observed by consumers before or after purchasing the product. Thus, testing methodologies, like traceability, microbiological quality, have been implemented both at the European and national levels to ensure effective monitoring and overall control.

- The increase in food-borne diseases, contamination in food products, and rise in consumer awareness about food quality and safety are giving rise to the food safety testing market. Moreover, strict government regulations that safeguard the processed and unprocessed food products are supporting the market growth in Europe.

Europe Food Safety Testing Market: Revenue in USD million, Spain, 2015-2020



4. Asia pacific: The Asia-Pacific food safety testing market is segmented based on contaminant type, food type, and country. The highly perishable food items such as fruit & vegetables and meat & poultry are increasingly analysed for pathogens as well as residue. The processed food products segment has also come under stringent regulatory scanning following the recent food safety scares. The new entrants in the Asia-Pacific food safety testing market are facing intense competition from the established players who enjoy greater client confidence and greater recognition among consumers.

Market structure

The U.S. market for Food Microbiology and food market totalled nearly \$56.4 billion in 2014. This market is projected to approach \$61.4 billion in 2015 and \$69.4 billion by 2020, registering a compound annual growth rate (CAGR) of 2.5% through 2021. The U.S. packaged food market size was estimated at USD 806.3 billion in 2016. Changing lifestyles, increased consumption of convenience foods among the masses are some of the major factors driving the overall market.

Development drivers

The continual development, testing and improvement of instrumentation, techniques and experimental procedures for the rapid and accurate enumeration and characterization of food microbiology is a rapidly expanding area. Such advances are of great importance in food quality control applications, as well as in the analysis of clinical, industrial and environmental samples. Some of the recently developed methods and assessment of their performance are reviewed. For example Cold-water-soluble starches are of commercial interest for use in instant foods such as puddings and microwave cooked foods, and small-crystallite starches have applications as fat substitutes. Various methods have been developed to produce a range of modified starch preparations with a variety of physical characteristics and applications. Study of such modified

starches may also aid understanding of the structure of starch granules.

Market Potential

The global food safety testing market size was valued at \$13,144 million in 2017, and is estimated to reach \$23,204 million by 2025, registering a CAGR of 7.3% from 2018 to 2025. Food safety testing refers to the inspection of food products for disease-causing organisms, chemicals, and other hazardous materials. It is generally targeted at three primary food contaminants namely, pathogens, chemicals, and genetically modified organisms (GMOs).

Food fraud is committed when food is deliberately altered for financial gains with the intention of deceiving consumers. The food standards agency (FSA) specifies two main types of food frauds namely, sale of food that is unfit and potentially harmful and deliberate misdescription of food.

Implementation of various regulations on food safety, particularly in the developed economies, drives the growth of the global food safety testing market. Recycling of animal by-products, sale of goods past their use by date, inclusion of harmful ingredients, and unsafe food handling processes are some of the major food fraud activities. The consumption of contaminated food, including toxic chemicals and radioactive materials, results in foodborne illness, which may even lead to death. The implementation of stringent regulations by many leading food safety organizations, such as Food Standards Agency, European Food Safety Authority, Food Safety and Standards Authority of India, and Canadian Food Inspection Agency, to prevent ill health of consumers and food fraud is expected to drive the growth of the global food safety testing market. In addition, rise in economically motivated adulterations (EMAs) due to high competition among food producers, and increase in instances of food debasement, such as adulterations, pesticides, artificial taste enhancers, and certifications, boost the growth of the food safety testing market. However, lack of food control infrastructure in the developing economies, complexity in testing techniques, and lack of harmonization of regulations are anticipated to hamper the growth of the market.

Universities offering Food Microbiology Education (Globally, Continent Wise (Europe, America, Asia pacific, Middle East))

Mentioned below are some of the renowned Universities in Europe

- Technical University of Munich, Germany

- University of Goettingen, German
- Leibniz University, German
- Agricultural University of Athens, Greece
- Wageningen University and Research Centre, Netherlands
- Utrecht University, Netherlan
- Moscow Agricultural Academy, Russian Federation
- University of Life Sciences in Lublin, Poland

Mentioned below are some of the renowned Universities in America:

- Centre for Agriculture Excellence, University of the Fraser Valley, Canada
- University of British Columbia, Vancouver
- Penn State University College of Agricultural Sciences, USA
- University of Guelph in Guelph, Ontario
- Iowa State University, USA
- Michigan State University, USA
- Ontario Agricultural College, Ontario
- New Mexico State University, USA
- Texas A&M University, USA
- North Carolina Agricultural and Technical State University, USA
- The Ohio State University, USA
- University of Nebraska-Lincoln

Mentioned below are some of the renowned Universities in Asia Pacific region:

- Asia Pacific University of Technology and Innovation (APU), Malaysia
- Seoul National University, South Korea
- University of Tokyo, Japan
- Chung-Ang University, South Korea
- Harbin Institute of Technology, China
- University of Queensland, Australia
- The Australian National University, Australia
- Nanjing Agricultural University, China
- Indian Agricultural Research Institute, India

- Universiti Putra Malaysia (UPM), Malaysia
- Huazhong Agricultural University, China
- Institute of Technology Bandung, Indonesia

Mentioned below is some of the renowned Universities in Middle East region:

- Tel Aviv University, Israel
- Holy Spirit University of kaslik , Lebanon
- Jordan University of science and technology, Jordan
- Lebanese international university, Jordan
- Hebrew University of Jerusalem, Israel
- Ege University, Turkey
- University of Jiroft, Iran
- Agricultural and Food Sciences-King Faisal University, Saudi Arabia
- Zagazig University, Egypt
- Lebanese University, Lebanon
- The University of Jordan, Jordan
- Süleyman Demirel University, Turkey
- United Arab Emirates University, College of Food and Agriculture, UAE

Food Microbiology Research Institution :

- Institute for Food and Agricultural Research and Technology (IRTA), Spain
- National Agricultural Research and Innovation Center (NARIC), Hungary
- Food and Agriculture Organization of the United Nations
- The European Forum on Agricultural Research for Development (EFARD)
- French National Institute for Agricultural Research
- Malaysian Agricultural Research and Development Institute
- Louisiana State University Agricultural Center
- Tropical Agronomic Center for Research and Teaching
- International Center for Agricultural Research in the Dry Areas
- National Center for Agricultural Utilization

Research

- UBC Faculty of Land and Food Systems

Funding in Food Microbiology and Food Safety

As implementation begins for the Food and Drug Administration's (FDA) new Food Safety Modernization Act (FSMA) rules, farmers and food businesses are increasingly looking to Food Safety Outreach Program (FSOP)-funded programs for resources and training to help them come into compliance. FSOP is a federal grants program that funds community-based organizations, non-governmental organizations, cooperative extension, and local, state, and tribal governments' training and technical assistance programs focused on food safety to help address FSMA related topics.

The program, which is administered by the U.S. Department of Agriculture's (USDA) National Institute of Food and Agriculture (NIFA), recently announced \$7.6 million in available FSOP funds for FY 2019 – an increase of \$1 million in grant funding from last year. An additional \$150,000 is available for applications to either project type that increase outreach to communities of colour: Collaborative Engagement Supplements. Organizations applying for this supplemental support must include a significant collaboration with any of the following academic institutions: 1890, 1862, 1994, Insular Areas, Alaska Native, Native Hawaiian, and Hispanic Serving Agricultural Colleges and Universities.

Future Prospect of Food Microbiology

Future Microbiology is a MEDLINE-indexed, peer-reviewed journal from the Future Science Group providing essential information to the research community, covering basic, translational and clinical research in microbiology (bacteriology, virology, mycology and parasitology) and the impact on human health.

Aims & Scope

- The molecular basis of microbial diseases
- Microbe–host interactions
- Overviews highlighting optimal therapeutic and diagnostic approaches, along with potential future options
- The use of microbes in the treatment of disease and genetic engineering
- Summaries evaluating newly approved antimicrobial agents

- Pharmacoeconomics and cost–benefit issues in microbiology
- New and re-emerging microbes impacting human health
- Microbial genome research, and the implications to higher organisms
- Microbes and cancer
- Epidemiologic studies and trends
- The problem of drug resistance, and potential methods to overcome this
- Defense against the use of microbes in bioterrorism
- Real world evidence and outcomes research

Conclusion

Culture-based and genomics methods provide different insights into the nature and behaviour of bacteria. Maximizing the usefulness of both approaches requires recognizing their limitations and employing them appropriately. Genomic analysis excels at identifying bacteria and establishing the relatedness of isolates. Culture-based methods remain necessary for detection and enumeration, to determine viability, and to validate phenotype predictions made on the bias of genomic analysis. The purpose of this short paper is to discuss the application of culture-based analysis and genomics to the questions food microbiologists routinely need to ask regarding bacteria to ensure the safety of food and its economic production and distribution. To address these issues appropriate tools are required for the detection and enumeration of specific bacterial populations and the characterization of isolates for, identification, phylogenetic, and phenotype prediction. The most commonly used forms of bacteriological analysis in food microbiology are detection and enumeration. The presence of specific bacteria and their concentration must be determined, to assess and control safety hazards, the potential for spoilage or to ensure correct product characteristics. The bacteria of interest to food microbiology can be divided into infectious agents, causes of foodborne intoxication, spoilage, and processing aids. Metabolic activity of a bacterium may be considered as causing spoilage or as a processing aid depending upon the desirability of the changes that result.