

**Mathews, Karl R., ed. (2006). Microbiology of Fresh Produce: Emerging Issues in food safety. Washington, D.C.: ASM press. 239pgs.**

Reviewed by Amr Elzawily, December 2008

This book is one of the newest books discusses the existence of microorganisms in fruits and vegetables. I found this book very interesting for several reasons; first, it is related to our health and our food. Second, it helps us to know how our food can cause food borne illnesses, and also how our food can prevent many other diseases such as, heart disease, cancer, diabetes. Third, it helps us to know what precautions we can take to prevent these dangerous diseases.

People are looking for healthy food. Healthy food means food that has good minerals, and that is clean to avoid foodborne illnesses. According to Matthews (2006), “Nearly 60% of illnesses were associated with Salmonella and norovirus.”(P 10). Fresh fruits and vegetables are a basic part of a healthy diet because they contain vitamins, minerals, and fiber. Matthews says, “Reports of estimates of tens of millions of cases of food borne illness in the United States annually indicate the magnitude of this problem.”(ix) These reports inform us about the importance of healthy food. It is important to keep fruits and vegetables free from contamination from microorganisms such as, virus, bacteria, and parasites. Mathews informs readers how to control microorganisms on fruits and vegetables from the beginning when they are seeds, until when they reach to the consumers’ hands.

All the chapters of this book are well organized and written. The contributors of this book have done a very interesting job explaining the importance of high quality food and the serious role of fruits and vegetables in a healthy diet. This book includes seven chapters. The book begins with a background about the harvest, preharvest, food

preparation, microorganisms (viruses, bacteria, and protozoa) and outbreaks to inform the reader about the association between microorganisms and fruits and vegetables. Chapters 2 and 4, present an accurate introduction about good agricultural methods that can reduce foodborne illnesses. These chapters also inform readers about many different things such as quality of water, recommendations for using irrigation methods, the importance of workers' hygiene, sanitation, and recent technologies in food safety. Chapter three is interesting and useful for all researchers who are new in the field and need to understand the bases of microbiology since it is about the biological structure and processes of food borne pathogens. Chapters 5, 6, and 7 deal with the practical methods, treatments, processes, detections, and future research. These chapters also discuss the decontamination of fresh produce by food pathogens, and consumers' handling practices. Measures must be taken before and after, also during production, to prevent food contamination food.

This book includes a collection of interesting points recognized by researchers in the same field. I am glad to say that this book accomplishes many important things such as, a background about microorganisms and how to control the microorganisms in our fresh fruits and vegetables. It also informs readers about the newest technologies, which are used in the decontamination of produce to prevent the foodborne illnesses. Thus, it covers many points from the seed stage, until the post harvest stage. In the end, it gives fascinating directions and advice for the future.

Although Matthews's book covers many points in detail, there are several weaknesses in his arguments and the first is that he tends to generalize some points. He claims that (2006) "Currently in United states there are **no** irrigation water quality regulations" (p 31). I find it difficult to believe that there are no irrigation regulations in United States, although there might be poor irrigation regulations or a lack of irrigation

regulations. Second, he talks about the microorganisms of fruits and vegetables, but he does not mention anything about other kinds of food; although, they have microorganisms too. Third, in chapter 6, he informs us about detection, testing and decontamination methods for seed sprouts not for all the stages of the plant. Also in chapter 4, he describes the development of post harvest disinfecting system not for all the plant stages such as the pre harvest or harvest stages.

This book is a valuable resource for microbiologists and food scientists, not only for those who are looking to increase their understanding about the microorganisms and foodborne illnesses, but also for those who are looking for additional references, which the authors provide after each chapter. This book will be useful to food safety experts, government, and businessmen, who need to know how to control microorganisms in fresh produce, and food borne illnesses. Furthermore, this book will be very good guide for people who work in environmental and agricultural fields, because it will help them to understand all stages for the fresh produce from the seed to the post harvest. Overall, I am pleased to recommend this book.