

Ian Mosby, Sarah Rotz, and Evan D.G. Fraser

Uncertain Harvest: The Future of Food on a Warming Planet

Regina, Saskatchewan: University of Regina Press, 2020

ISBN: 978-088-977720-0 (PB) \$27.95 280 pp.

Making its debut during the uncertain and unsettling time of the COVID-19 global pandemic, *Uncertain Harvest* matches 2020's tone with its unsettling topic of how the global food supply is likely to be devastated by ever-worsening climate change. Despite its gloomy topic, the authors manage to leave the reader with an array of realistic solutions that leave the reader optimistic and well-informed. Ian Mosby, Sarah Rotz and Evan D.G. Fraser teamed up to write this book, each with their own specialisation but all experts in the field of food philosophy. The narrative style of this book regularly refers to each author by (first) name, making the reader feel like a fourth participant in a lively discussion between the three. While all three are incredibly knowledgeable, that does not mean they are all in agreement about what potential solutions should look like. In fact, the disagreement between the authors is a recurring narrative device within the structures. The regular reference to each author by name throughout the book took some time to get used to, but I appreciate the clarity it provides in how each of the three authors contributed to the book as well as the lack of pretension in there being only one conclusion possible from the research and problems being presented.

The self-professed thesis of *Uncertain Harvest* is to explore potential solutions for continuing to feed the planet despite population growth and increasing climate change. The introduction drives the point home that current food system will not be enough: most cities have only three days' worth of food on hand, stores that would quickly run out if a weather-related disaster affected either growth of the food itself or the supply chain that gets it into the public's stomachs. The fact that only eight crops make up three quarters of the world's calories increases this risk of disaster, and the complicated monopolies and obscure systems that link the global food chain make solutions hard to figure out. The introduction focuses on enlightening the reader about the problem at hand, and explains why simply increasing staple grain yields would not be a solution, bringing up a whirlwind of contributing historical and contemporary factors. The introduction could be a section in an environmental philosophy or food ethics course all by itself, spawning endless ideas for further research and discussion topics.

Each of the chapters is titled with a type of food that has been suggested as adaptable and sustainable, the kind of food that perhaps ought to be focused on for a more secure future supply of food. They are: algae, caribou, kale, millet, tuna, crickets, milk and rice. The chapters do not exclusively talk about one of these foodstuffs, but rather use it as a starting point to explore their sector of the food supply or to address some point related to it. For example, the

REVIEWS

chapter on caribou explains why indigenous communities will be affected by climate-related food scarcity before other groups, and why it is important to listen to indigenous communities' solutions. As seen in this chapter, the book is heavily influenced by Canadian data and examples, but the points being made would apply when abstracted globally. The 'Kale' chapter discusses the systematic flaws related to privilege in the ability to start or maintain agricultural operations and why this is an unsustainable growth pattern: 'farms are getting bigger and fewer in number, and they're mostly being run by older farmers who increasingly depend on low-paid and – many would argue – exploited agricultural workers' (p. 48.) The third chapter, 'Millet', was in my opinion the stand-out part of this book, offering an excellent discussion of GMO crops that avoids being either anti- or pro-GMO while still explaining the realities of their contribution to the global food supply. The authors bring in the idea of modest or 'appropriate' technologies and good crop hygiene knowledge as more important elements of crop yield growth, and offer robust statistics and reasoning for the effects on caloric yield and annual income.

To quickly summarise the remaining chapters: 'Tuna' talks primarily about fish fraud and the complicated global seafood system, 'Crickets' has an overview of the climate damage that meat production causes and surveys some current vegetarian protein sources, and 'Milk' gives the reader a look into a futuristic milking facility that uses 'fitbit' technology to improve both the production and wellbeing of its cows, leading into a discussion of the pros and cons of precision agriculture (through a reliance on technology and data). Finally, the concluding chapter, 'Rice', does a nice job of explaining how the previous chapters are connected, based on an example of an announcement from 2019 of a new strain of rice which converts sunlight more efficiently into growth. When taken as a whole, the book does a great job of educating the reader on food supply issues in a multi-faceted way that, had the authors stuck to a single topic or argument, would never have produced such a broadly enlightening book.

However, due in part to that breadth, the book does not succeed in all particulars. Several seemingly basic considerations are left out of the chapters: for example, the fish chapter leaves out a discussion of sustainable seafood or how climate change might affect the global seafood supply, and the chapter on vegetarian protein sources only discusses the current issues facing its popularity, leaving out the discussion of future potential found in other sections. Of course, it is impossible to include all aspects of what global sustainability would look like for each food type mentioned, but the main disappointment of this book is that it does not deliver what it claims at the outset to be the thesis of the book. What are the adaptable, sustainable foods that if pursued would offer food security despite global climate change? The chapter headings are not an answer to that question, and by the end of the book the reader will not walk away with that knowledge. Importantly though, I do not intend that to be

REVIEWS

a criticism of *Uncertain Harvest* as a book in itself, just of its self-attributed summary. This book offers an amazing insight to the global food supply chain, the issues that climate change is likely to cause, a wealth of information on the history of our current system and several brilliant and well-researched solutions to certain issues we face. I would highly recommend this book (or if pressed for time, the ‘Algae’ and ‘Millet’ chapters at a minimum) to anyone, from teachers looking for material for their environmental or food philosophy courses to casual readers looking for an engaging and eye-opening book about an important aspect of daily life.

CLAIRE WORTHINGTON MILLS
University of Georgia, USA