

The War on Bugs

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Will Allen is a farmer, scholar, and activist whose lifelong labors have helped him to ask questions that are both practical and incisive, and reveal more about the long history of U.S. farming than a purely intellectual treatise could offer. Allen's concerns are anthropological in that he is searching to discover the historical roots of the widespread acceptance among American farmers and consumers of industrialized agriculture, particularly the routine application of chemicals to crops. It is and has been no secret that the chemicals used in industrial agriculture are poisonous to humans, animals, and the environment, but their use continues to dominate U.S. agriculture. Allen's writing is geared toward an audience much broader than academic anthropology. Thus, while he does not present the proof for his arguments in the detailed manner that purely academic literature would require, most of his references appear in the back of the book. This book is useful and important to anthropologists not because of the answers that it gives but because of the questions that it asks and the answers it suggests that we need to find.

The book is organized around three different historical narratives, and each intersects with the concerns of U.S. farmers. The first is the story of U.S. corporate business as it expanded from southern colonial farms into the U.S. industrial and war economies. The second story is that of resistance to the interests of corporate business by small farmers and scientists weary of the industrial and chemical methods promoted by agribusiness. The third is the one told by the corporations themselves, chemical companies and manufacturers who advertised in the rural farm journals that brought debates, techniques, and entertainment into the homes of farmers.

The roots of corporate agriculture were planted with the first seeds sown by European colonists: The London Company and the Dutch West India Company were corporations chartered to supply Europe with agricultural commodities and profits to investors. Allen discusses how the intensity of these enterprises exhausted farmland, and created problems that needed new solutions when farmland became a scarce resource. These solutions came from scientific innovation. Allen discusses how the discoveries by laboratory scientists, such as the discovery by Germany's Justus von Liebig of the specific elements needed by plants for growth, solved these immediate problems. This tale, of course, is nothing new, but Allen's narrative is unique in that it shows how small bits of knowledge, first applied to solve practical problems, were swept up in the growth of industrial capitalism and contributed to the dominance of agribusiness corporations over the food system. Science taught businessmen that the same chemicals produced as byproducts of modern industry could both supply exhausted soils with the elements plants need and kill the pests that devastated large-scale agricultural production. Those same chemicals could also be combined to produce explosives and poisons used on battlefields and the death chambers of concentration camps. The shortsightedness of corporate profit motives and of the elemental methods of laboratory science, however, meant that there was little concern in these same businesses for the safety and public health consequences produced by industrial chemicals when used in farmers' fields.

Resistance to corporate agriculture by small farmers is one of the most interesting and intriguing stories that Allen tells, but it is also one that still needs more exploration. He shows how resistance started extremely early in parts of the eastern states, well before the Declaration of Independence. While there may be a paucity of sources on the opinions of small farmers, especially in the early periods when some of them were barely literate and, one assumes, the rural farm journals were read mostly by large-scale farmers, we need more data on trends in farm size. Allen focuses on the emergence of populist

movements in the American colonial period, during the economic crashes of the late 19th century, and discontent and devastation suffered by small farmers during the Great Depression.

As patients of modern medicine, small farmers had a history of experience with the chemicals used to kill pests on their fields. They were also skeptical of the advice given by agribusiness, because small farmers often suffered while corporate farmers weathered the economic storms of the 19th century. The crises of 1872 and 1894 were particularly illuminating moments in the history of small-scale agriculture, because small farmers were most affected by crashing crop prices and bank insolvency. Waves of foreclosed-upon farmers headed west to find new land, a recurring event in the persistent crises of the history of American capitalism.

Reproduced within the pages of each chapter are the advertisements published in rural farm journals by chemical companies. These narratives show how early on, advertising became a medium for the spread of corporate inputs. These advertisements tell a counter-narrative to the one presented in the written text. They market chemicals by depicting rat-catchers devouring rodents, cartoon heroes running swords through pesky pests, and even characters drawn by the famed Dr. Seuss gargling pesticides.

One of Allen's most powerful arguments is that these farm journals had an important impact on the opinions of farmers toward agricultural chemicals. Unfortunately, since we do not know who read those journals, it is extremely difficult for Allen (or any historical student) to prove this argument, though it is suggestive. His use of the journals does effectively detail the persistent campaigns of misinformation waged by chemical companies. The advertisements argue for the benefits of industrially produced chemicals regardless of the actual evidence of the serious dangers of these substances. Thus, this is not a narrative of truth but of manipulation.

The most interesting and revealing chapters of this book are those in which Allen brings these three narratives together in the period during and after World War I. Corporations such as DuPont, Monsanto, Bosch, and BASF were bolstered by the war economy, producing explosives and marketing the same chemicals to U.S. farmers. At the same time it was becoming public knowledge that arsenic and other chemicals were poisoning children and livestock and causing numerous public health emergencies.

Still, the chemical companies continued to advertise their products, and regulatory agents took years to act. Profit seemed to be the motive of both the chemical companies and the U.S. regulators.

It is here and in the following chapters that the most pressing questions are raised by Allen's work. In the 1950s and 1960s, universities in the United States and India partnered to establish a network of educational institutions in India modeled after the U.S. land-grant system. Although alternative methods for increasing crop yields were in existence at the time, the partnerships shared only knowledge of industrial techniques. The Green Revolution did increase the sheer volume of cereal crops produced, but devastated and continues to injure Indian small-holding farmers. It led to an increased reliance on only a few grains and to an unhealthy constriction of people's diets.

The U.S. delegation to the United Nations continues to stifle attempts to promote alternative agricultural methods, even though many farmers have found immense success with techniques such as the System of Crop Intensification. At the recent Rio+20 Conference, it was only during the nongovernmental organization symposiums and away from the main official sessions that alternatives to corporate agriculture were discussed at all. We need to reexamine the long history of American imperialism in the global food system with these connections in mind.

In addition, we critically question the image of the American farmer that has been pushed so strongly by the proponents of industrial methods of agriculture. By presenting images of family farmers as though they were the primary users of the products of the large agricultural corporations and the main producers of agricultural products, they seriously distort reality and make it appear that support for American families necessarily translates into political support for the corporate agricultural model. Allen's work asks us to dig deeper into the history of the small family farmer and to understand in detail the process by which the image imposed on American farming by agribusiness came to dominate public consciousness. In a year when the U.S. Farm Bill is on the legislative table, these questions are important intellectually and politically.

These are only two of the important questions raised by Allen's work, but we expect that readers in the field of anthropology will be inspired to ask many

more. Allen's ambitiousness in writing this book has brought broad and related themes into view that converge in the historical processes and public consciousness surrounding chemical farming in the

United States. It is a highly useful book for undergraduate classes and for scholars seeking to develop new ideas and critical perspectives on the history of current issues in agriculture.