

***Healing Ground: Climate, Justice, and the Deep Roots of Regenerative Farming* by Liz Carlisle**

Review by Fredric L. Quivik, Saint Paul Area Care of Creation

Liz Carlisle's *Healing Ground* is about regenerative agriculture and the role it must play if the Earth's human population is to adequately address the looming climate crisis. Carlisle teaches environmental studies at the University of California, Santa Barbara. Recognizing that industrialized agriculture is one of the leading sources of the carbon imbalance in our atmosphere, which is causing the climate crisis, she initially set out to understand and write about the ways industrial agriculture and regenerative farming interact with soils. Industrial ag not only emits tremendous volumes of greenhouse gasses by its dependence on burning fossil fuels; it takes carbon out of soils, which are an important carbon sink. Soils currently sequester three times the amount of carbon that is in all the plants on Earth and three times the amount of carbon in the atmosphere. Industrialized ag is stripping that carbon from soils and putting it into the air as well. Regenerative farming sequesters carbon in soils. But the more Carlisle studied this dynamic, the more she realized that the problem wasn't just in a poor choice of farming technique; the problem is fostered by the nation's institutions that shape the basic contours of industrialized ag: a capitalist system that views land as a financial asset and not as complex ecosystems; private ownership of land; and a history of laws that have worked to prevent people with long cultural histories of sustainable farming practices from having access to farmland.

Carlisle's four main chapters are about four prominent minority groups in the United States: Native Americans, African Americans, Americans with ancestry in Latin America, and Asian Americans. In each chapter, she describes the history of American laws and practices that have kept large numbers of those minority groups from access to the land. She describes the sustainable practices those groups brought with them to the U.S. (or, in the case of Native Americans, had been practicing more millennia before Europeans arrived). And she describes the contributions those groups are making to help neighboring Americans adopt more sustainable practices. For example, as Indians in Montana are restoring bison populations to their reservation lands, they are working with neighboring ranchers to help them manage their range so that cattle will mimic what bison do naturally to sustain healthy grassland, rather than degrade grazing land, as cattle do when they are left on their own.

Healing Ground outlines at least three characteristics of industrialized ag that make it destructive of environments and of people: it depends on fossil fuels and petrochemicals; it is based on the plantation model of farming, which is to say large tracts of land in private hands that depend on enslaved or poorly paid workers to be profitable; and it creates vast fields that are monocultures rather than diverse ecosystems that allow plants, insects, birds, and people to thrive. Each chapter describes how traditional practices allow farms to prosper without reliance on fossil fuels or petrochemicals, as the diverse ecosystems of those farms build soil fertility and keep pests at

bay (artificial fertilizers, herbicides, and pesticides being the petrochemicals on which monocultures depend). A major barrier, however, to more folks from those minority groups having access to farmland, and therefore having opportunity to farm in sustainable ways, is the land-tenure system in the U.S., which over the past century has concentrated land in ever fewer hands. And those hands increasingly are not human hands but the institutional hands of private investment entities. Carlisle notes that the U.S. is at an important transition moment, as many aging farmers are leaving the vocation without descendants willing to take over their farms. Programs could be established to make those lands accessible to farmers who will employ sustainable methods. Private investment entities, however, are grabbing the land to serve as financial assets rather than healthy ecosystems.

Carlisle writes beautifully. Minnesotans will find her descriptions of Hmong farmers particularly gorgeous, even if her Hmong farmers are in California, not in the Upper Midwest.

