Dirt: The Erosion of Civilizations, by David R. Montgomery
Google Earth QUEST - Quotes
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## Chapter 1 – Good Old Dirt

- Page 2: "At the dawn of agricultural civilizations, the 98 percent of people who worked the land supported a small ruling class that oversaw the distribution of food and resources. Today, the less than 1 percent of the U.S. population still working the land feeds the rest of us."
- Page 5: "Understanding how human actions affect the soil is fundamental to sustaining agricultural systems, as well as understanding how we influence our environment and the biological productivity of all terrestrial life."

### **Chapter 2 – Skin Of The Earth**

- Page 13: "This time Darwin got it right. Soil is a dynamic system that responds to changes in the environment."
- Page 23: "A civilization can persist only as long as it retains enough productive soil to feed its people."

#### Chapter 3 – Rivers Of Life

• Page 46-47: "Another commonality among agricultural societies is that the majority of the population lives harvest-to-harvest with little to no hedge against crop failure. Throughout history, our growing numbers kept pace with agricultural production. Good harvests tended to set population size, making a squeeze inevitable during bad years. Until relatively recently in the agricultural age, this combination kept whole societies on the verge of starvation."

# **Chapter 4 – Graveyard Of Empires**

- Page 58: "Roman philosophers recognized the fundamental problems of soil erosion and loss of soil fertility.... Roman philosophers exuded confidence that human ingenuity would solve any problems."
- Page 68: "Marsh's revelation was twofold: land did not necessarily recover after being abused, and people destroyed the balance of nature unconsciously in the pursuit of more immediate ends."

## **Chapter 5 – Let Them Eat Colonies**

• Page 110: "Europe solved its perennial hunger problem by importing food and exporting people."

#### **Chapter 6 – Westward Hoe**

• Page 133: "Since falling crop yields were apparent throughout the original states, how to protect soil fertility presented a fundamental challenge. "There appears to be no government that realizes its duty 'to promote the public welfare' by... impressing upon them the obligation which every cultivator of the soil owes to posterity, not to leave the earth in a less fruitful condition than he found it.""

### **Chapter 7 – Dust Blow**

- Page 155: "In a speech given before the annual meeting of the National Education Association in July 1940, Hugh Bennett would describe the dust storm of May six years earlier as a turning point in public awareness. "I suspect that when people along the seaboard of the United States began to taste fresh soil from the plains 2,000 miles away, many of them realized for the first time that somewhere something had gone wrong with the land.""
- Page 171: "... Yet global warming is predicted to increase the severity of droughts here in North America's heartland enough to make that of the Dust Bowl era seem relatively mild. Given the projected doubling of humanity in this century, it is far from certain that the world's population will be able to feed itself."

#### **Chapter 8 – Dirty Business**

- Page 195: "... He realized that higher wheat yields would require greater fertilizer inputs and that nitrogen was the key limiting nutrient. The obvious long-term solution would be to use the virtually unlimited supply of nitrogen in the atmosphere. Feeding the growing world population in the new century would require finding a way to efficiently transform atmospheric nitrogen into a form plants could use."
- Page 199: "It takes years to produce a barrel of oil; we use millions of barrels of day. There is no question that we will run out of oil the only question is when."
- Page 214: "It is no secret that if agriculture doesn't become sustainable nothing else will; even so, some still treat our soil like dirt and sometimes worse."

# **Chapter 9 – Islands In Time**

• Page 232: "Although a global rerun of Haiti, Mangaia, or Easter Island is by no means inevitable, the experiences of societies on islands around the world remind us that Earth is the ultimate island, an oasis in space rendered hospitable by a thin skin of soil that, once lost, rebuilds only over geologic time."

## **Chapter 10 – Life Span Of Civilization**

• Page 244: "Viewed globally, humanity need not face a stark choice between eating and saving endangered species. Protecting biodiversity does not necessarily require sacrificing

- productive agricultural land because soils with high agricultural productivity tend to support low biodiversity."
- Page 246: "Meeting this challenge would also help address the problem of world hunger because if we are to feed the developing world, we must abandon the intuitive, but naïve, idea that producing cheap food will eliminate hunger."
- Page 246: "Extending the life span of our civilization will require reshaping agriculture to respect the soil not as an input to an industrial process, but as the living foundation for material wealth. As odd as it may sound, civilization's survival depends on treating soil as an investment, as a valuable inheritance rather than a commodity as something other than dirt."