



FOOD, LAND, AND PEOPLE AND WORLD CIVILIZATIONS



WHICH OF THE FOLLOWING WAS THE MOST IMPORTANT ADVANCEMENT IN EARLY CIVILIZATIONS?

- Toolmaking (technology)
- Agriculture (farming, production, and processing)
- Writing (communication)



ARE THESE AREAS OF DEVELOPMENT AS IMPORTANT TODAY?

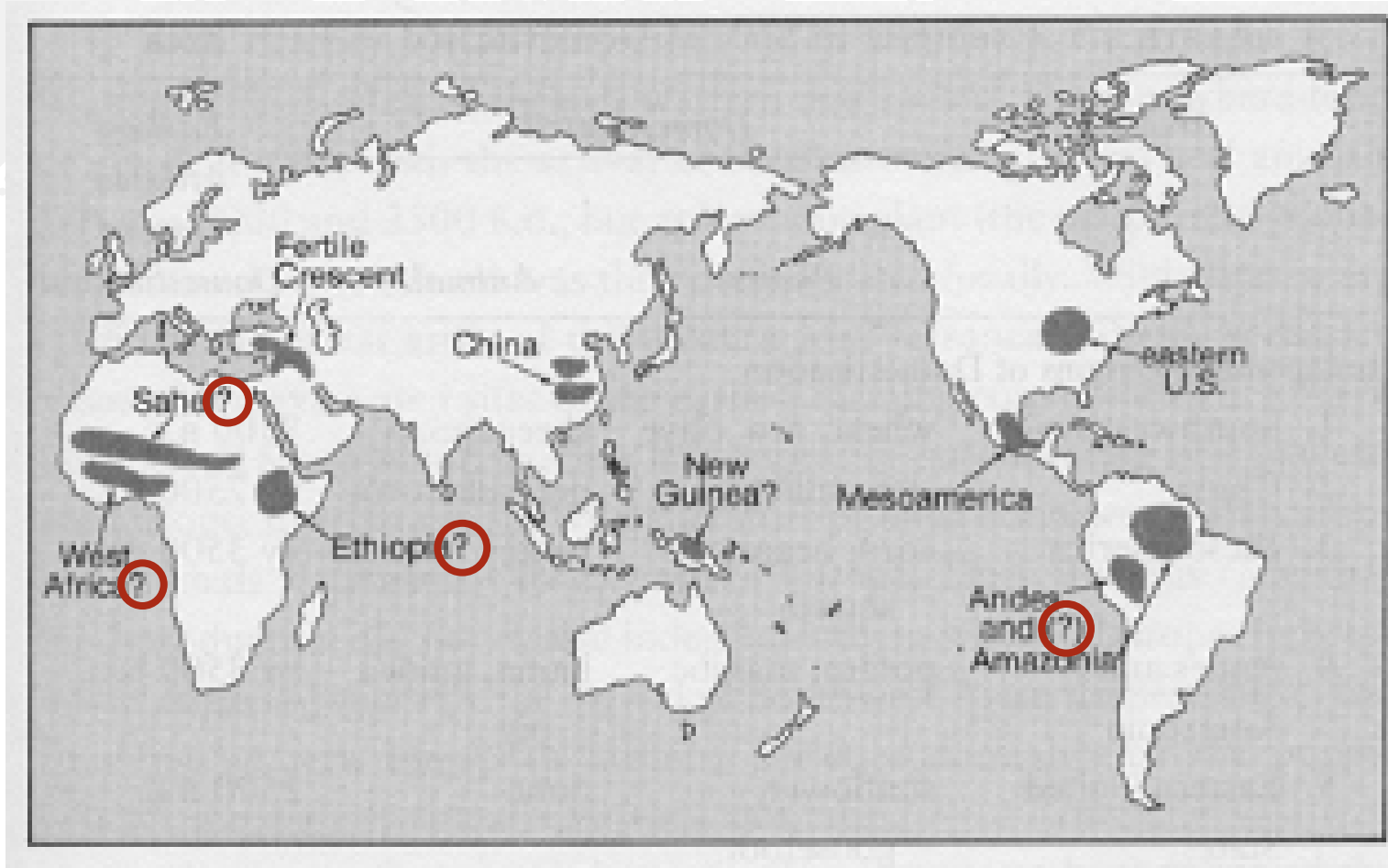
WHAT IS AGRICULTURE?

WHY FARM?

- Decline in availability of wild foods
- Depletion of wild game made hunting less rewarding; easier to gather grains
- Increased technology for collecting, processing, and storing wild foods
- Increasing population, increase food production, better diet
- Adopt food production or die at the hand of those who have (soldiers and germs)



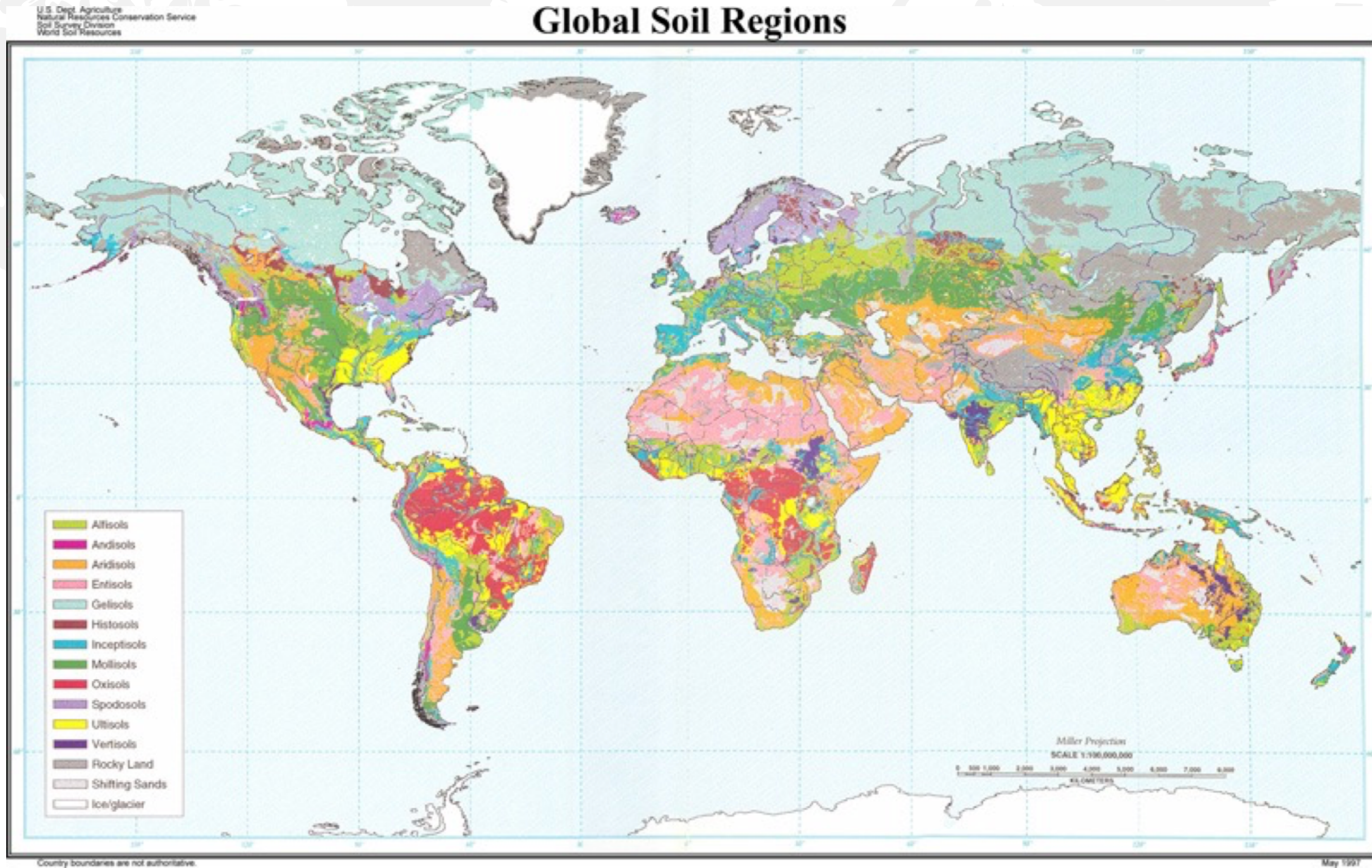
CENTERS OF ORIGIN OF FOOD PRODUCTION



A question mark indicates this area may be an origin, or else was influenced by the spread of food production long ago.

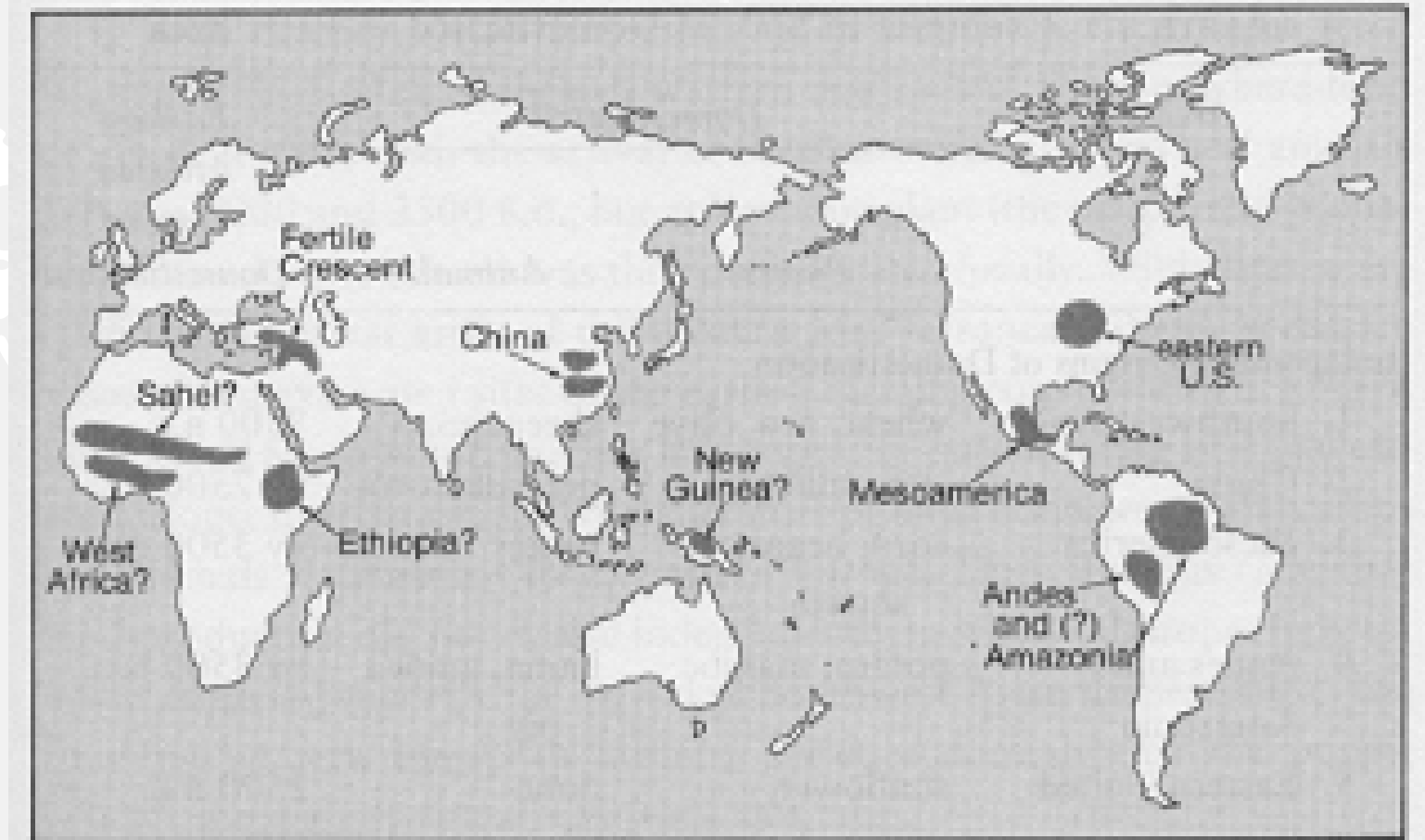
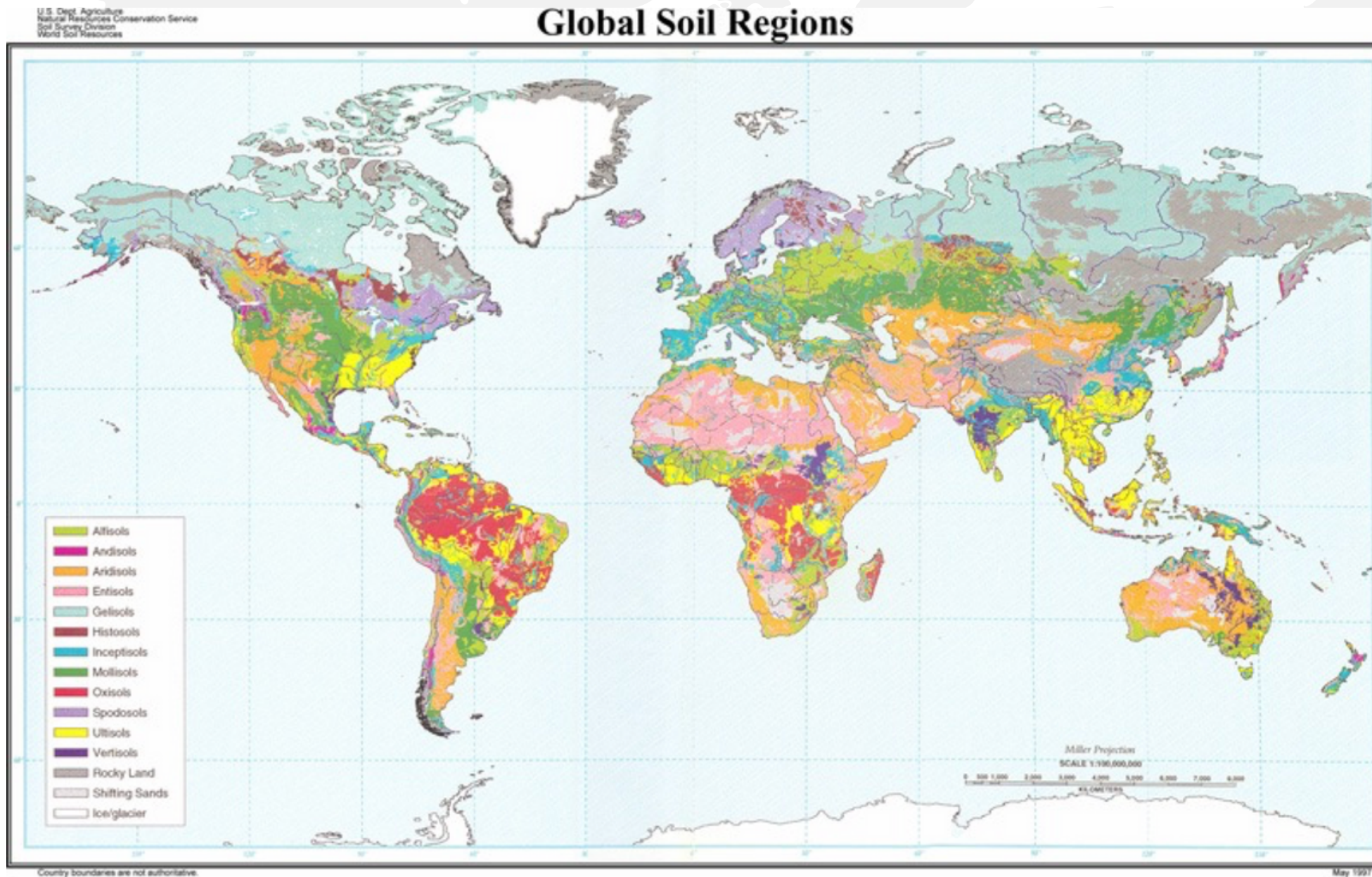
Area Date	Domesticated Plants	Domesticated Animals
SW Asia 8,500 BCE	Wheat, Pea, Olive	Sheep, Goat
China 7,500 BCE	Rice (SE Asia), Millet	Pig, Silkworm
Mesoamerica 3,500 BCE	Corn, Beans, Squash	Turkey
Endes, Amazonia 3,500 BCE	Potato, Manioc	Llama, Guinea Pig
Eastern United States 2,500 BCE	Sunflower, Goosefoot, Strawberry	None

WHAT'S THE BEST SOILS FOR GROWING FOOD?



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Global Soil Regions



MAJOR CROP TYPES AROUND THE ANCIENT WORLD

Area	Grasses, Cereals, & Pseudocereals	Pulses & Seeds	Fiber	Roots, Leaves, & Tubers	Melons & Fruits
Fertile Crescent	emmer, einkorn, wheat, barley	pea, lentil, chickpea	flax		muskmelon, grape (Turkey)
China	foxtail, millet, broom corn millet	soybean, adzuki, bean, mung bean	hemp		apple (Kazakhstan), orange (Southwest Asia)
Meso-america	corn	pole bean, scarlet runner bean, chocolate	cotton, yucca	jicama	squashes, tomato
South America	quinoa (Andes Amazonia)	lima bean, pole bean	cotton	manioc, sweet potato, potato, tobacco	squashes
West Africa	sorghum, millet, African rice	cowpea (black-eye pea)		African yams	watermelon, bottle gourd
India	rice (Southeast Asia)	hyacinth bean, gram bean	flax	onion	cucumber
Ethiopia	finger millet	coffee			
Eastern United States	maygrass, barley, knotweed, goosefoot			Jerusalem artichoke	squashes, strawberries
New Guinea	sugar cane			yams, taro	

DOMESTIC MAMMALS

- Meat production plus...
 - milk
 - transportation
 - plowing
 - wool
 - hides
- Evolution with humans
 - immunity to diseases (measles, tuberculosis, smallpox, flu, pertussis, malaria)



MAMMALIAN CANDIDATES FOR DOMESTICATION

Why some animals were NOT domesticated:

- Diet (poor feed conversion, carnivores)
- Growth rate too slow
- Problems with captive breeding
- Nasty disposition
- Tendency to panic

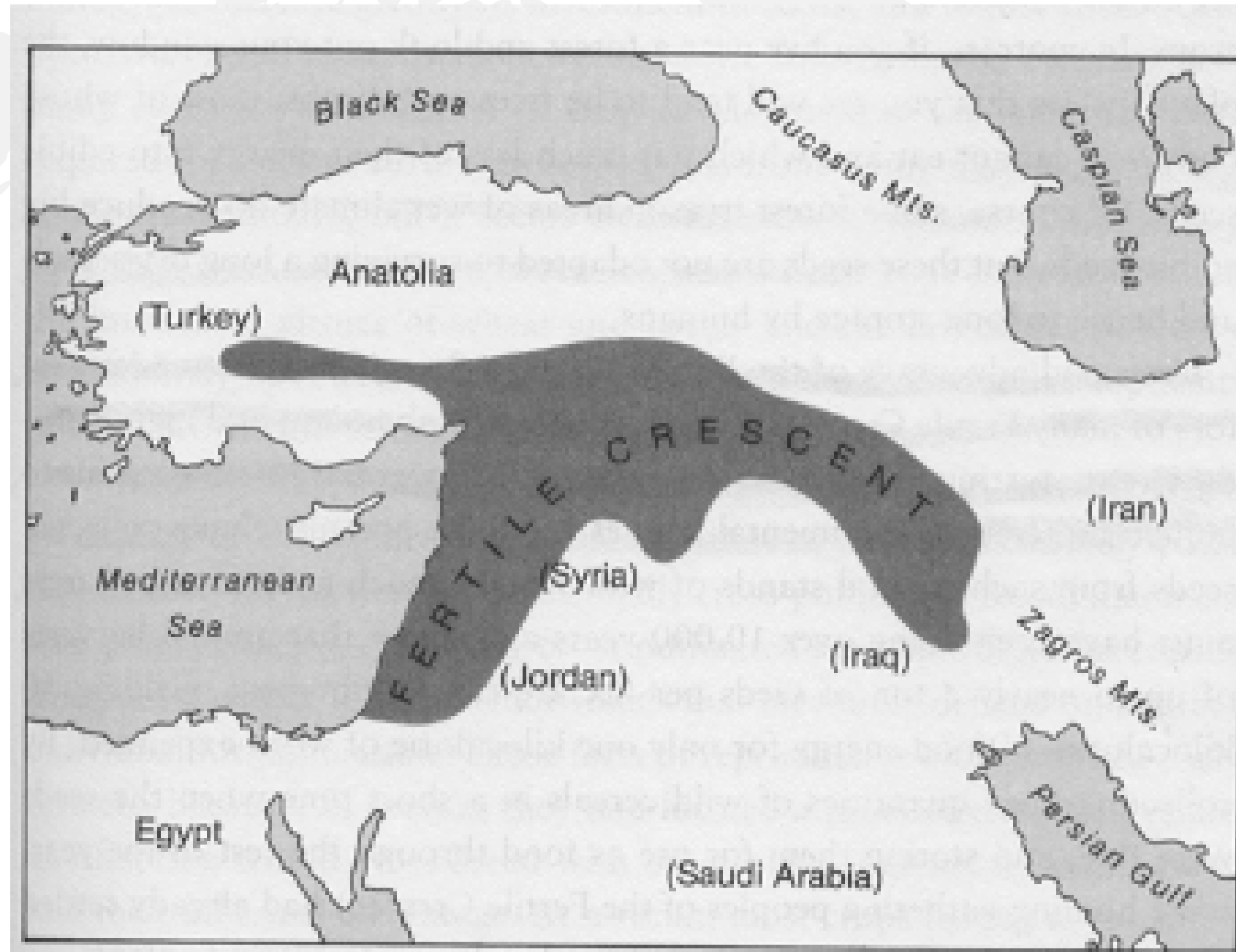
	Eurasia	Sub-Saharan Africa	Americas	Australia
Candidates	72	51	24	1
Domesticated Species	13	0	1	0
Percentage of candidates domesticated	18%	0%	4%	0%



DOMESTICATION OF ANIMALS

SPECIES	DATES BCE	LOCATION
Dog	10,0000	Southwest Asia, China, North America
Sheep	8,000	Southwest Asia
Goat	8,000	Southwest Asia
Pig	8,000	China, Southwest Asia
Cow	6,000	Southwest Asia, India
Horse	4,000	Ukraine
Donkey	4,000	Egypt
Water buffalo	4,000	China
Turkey	3,500	Mesoamerica
Llama/alpaca	3,500	Andes
Bactrian camel	2,500	Central Asia
Arabian camel	2,500	Arabia

FERTILE CRESCENT



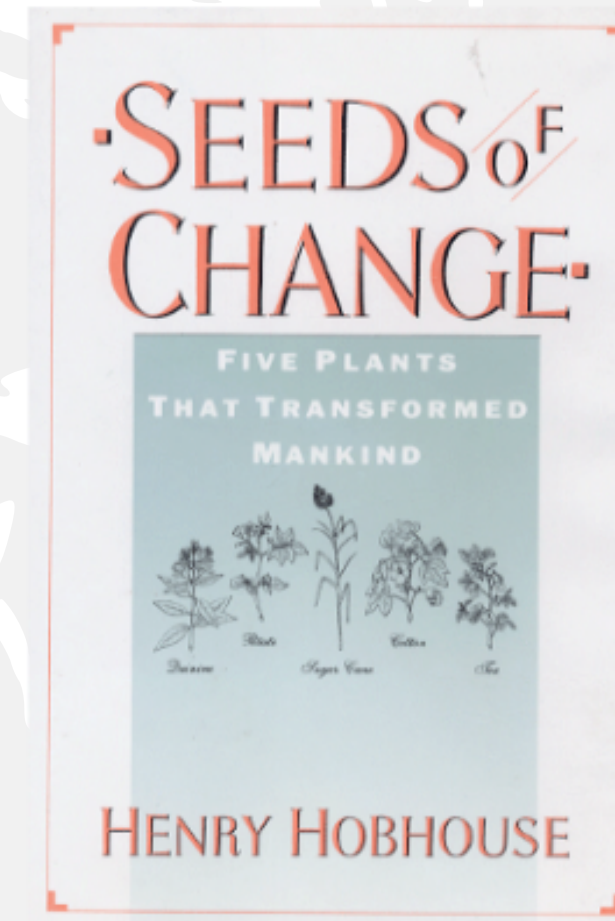
Civilization: Cities, writing, empires, and agriculture

- Mediterranean climate
- Fertile soil
- Easily domesticated plants
- Most of the plants pollinate themselves

SEEDS OF CHANGE: MOST INFLUENTIAL PLANTS THAT CHANGED THE WORLD

Five Plants that Transformed Mankind

- Quinine
- Potato
- Sugarcane
- Cotton
- Tea

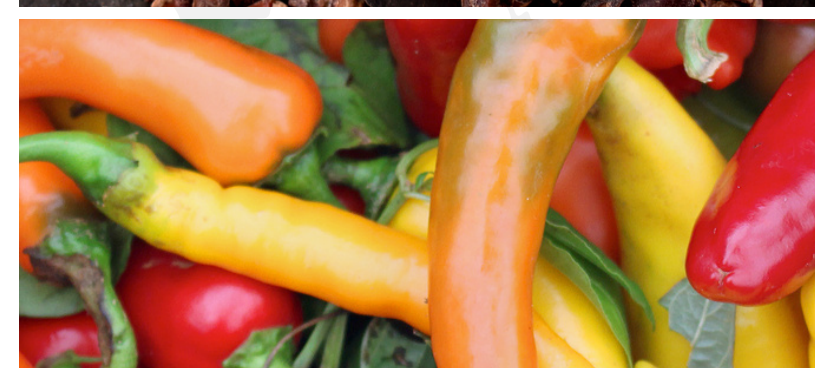
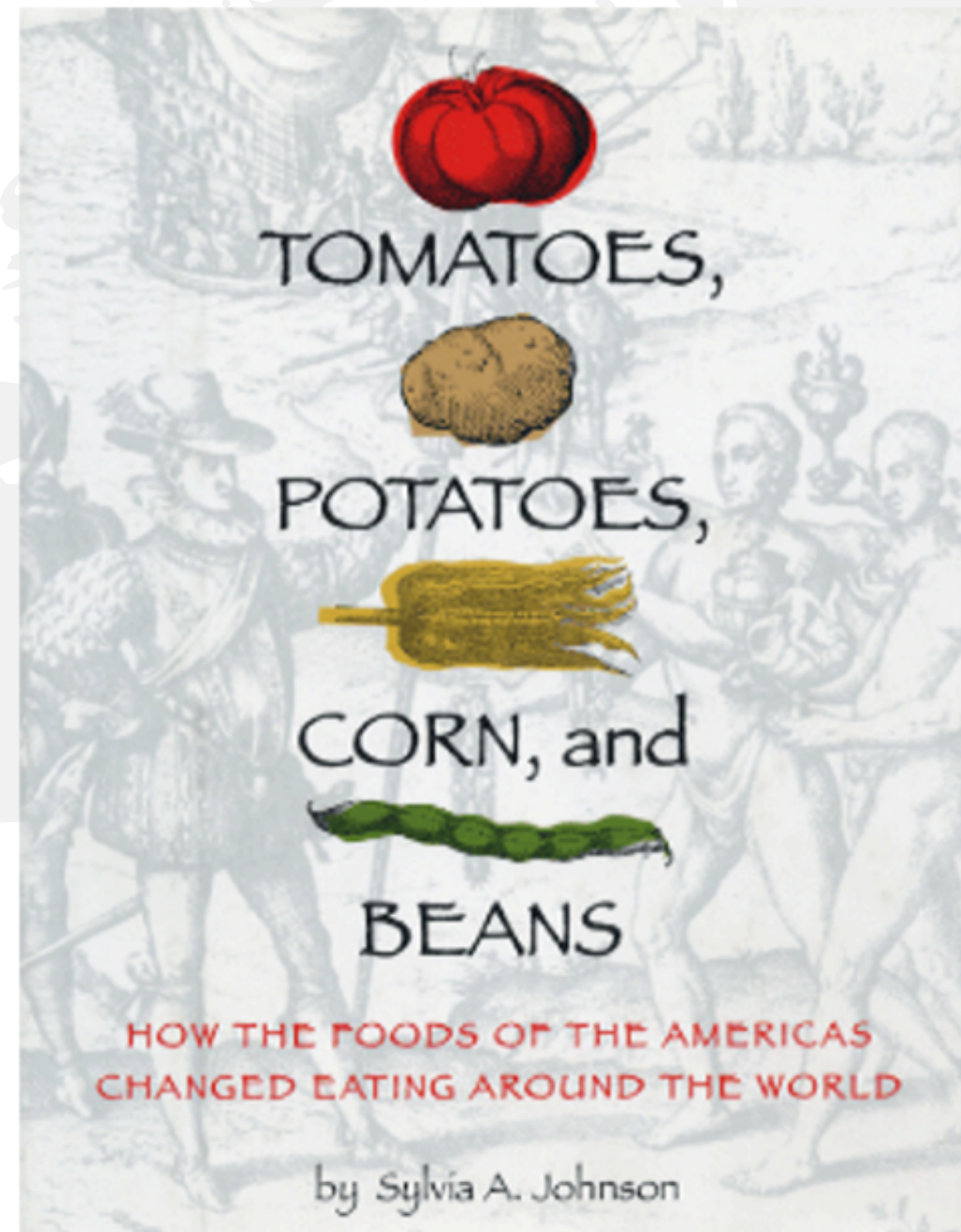


- What would the world have been without widespread slavery if there had been no sugar and cotton plantations?
- What would Africa and the United States be like now?
- would China have become a major world power in the 19th century if it had not been for the tea and opium trade?
- Would John F. Kennedy have become president?

TOMATOES, POTATOES, CORN, AND BEANS

Plants of the Americas

- Tomato
- Potato
- Corn
- Beans
- Chocolate
- Peppers



CLASSROOM IDEAS

- Prepare a taste test of foods from the New World and the Old World
- Plan a menu using particular civilization's food
- Show clips of Guns, Germs, and Steel (available at utah.agclassroom.org; search keyword “steel”)
- Dissect a typical meal in the United States, exploring the origins of the meal's content
- Locate on a world map the origins of Old World and New World foods; discuss how they have been traded and how they have changed societies and culture (search “Old World” or “New World” on utah.agclassroom.org Curriculum Matrix)





GEOGRAPHY DETERMINES
AGRICULTURE...WHICH CREATES
CIVILIZATION AND CHANGES CULTURE.

HOW IMPORTANT IS AGRICULTURE TODAY?
HAVE OUR USES OF AGRICULTURE CHANGED?