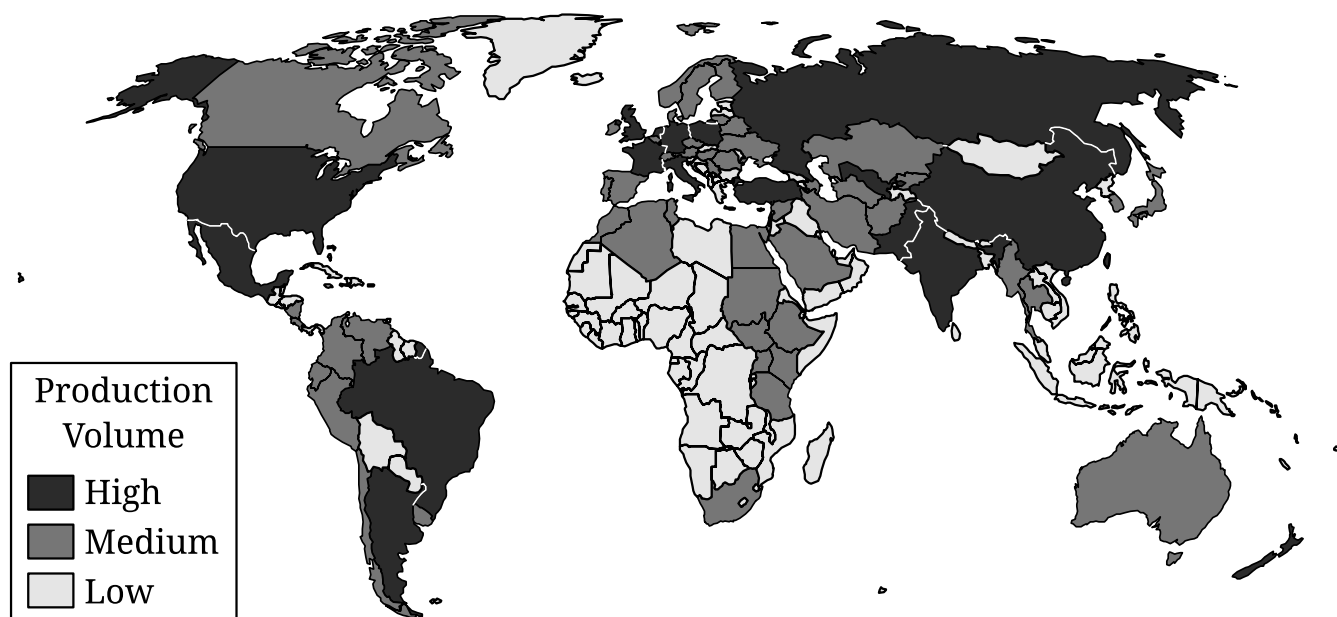
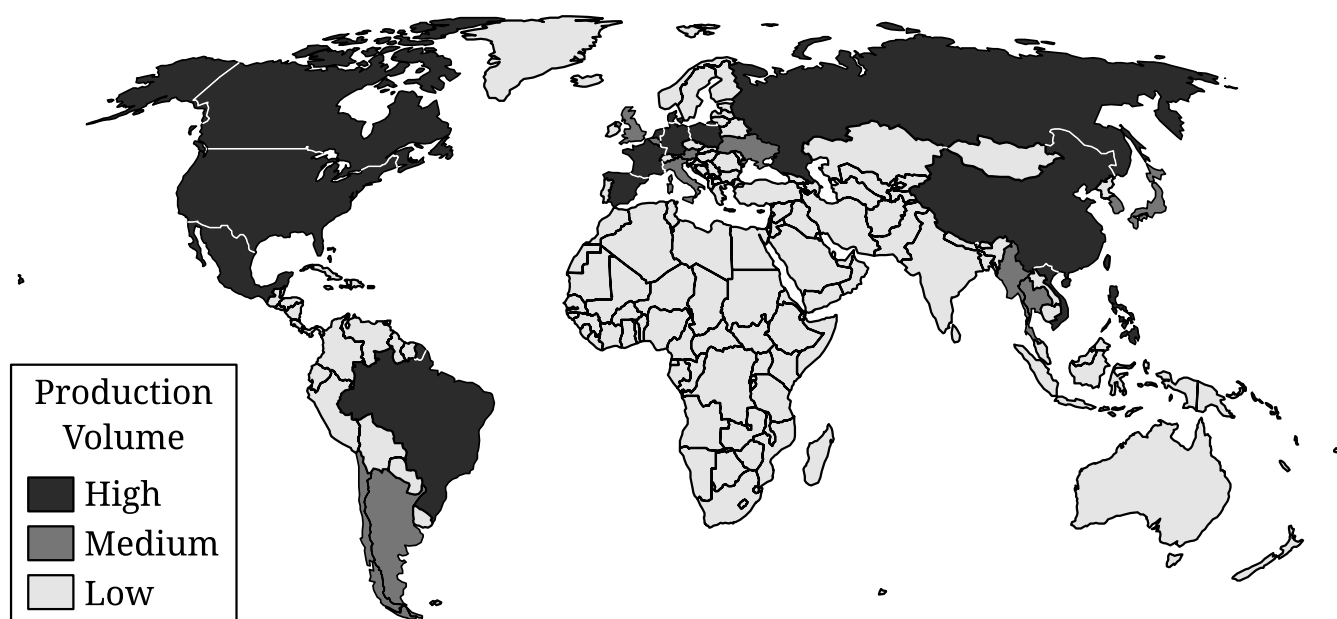


Map 1: Cow's Milk Production, 2018

Source: Food and Agriculture Organization

Map 2: Pork Production, 2018

Source: Food and Agriculture Organization

3. The global production of cow's milk and pork results in distinctive spatial patterns of contemporary agriculture and land use.

Respond to parts A, B, C, D, E, F, and G.

- A. Identify an example of a culture trait.
- B. Describe the spatial pattern of cow's milk production in Africa, shown in Map 1.
- C. Based on Map 1 and Map 2, compare the spatial patterns of cow's milk production and pork production in Asia. (Response must include both maps in the comparison.)
- D. Describe one environmental effect of agricultural land use such as commercial animal farms.
- E. Explain how the globalization of agriculture may affect local culture traits.
- F. Explain why regions of agricultural production may become interdependent.
- G. Explain how domesticated animals such as pigs spatially diffused to create the spatial pattern shown on Map 2.

STOP

END OF EXAM

Question 2**PER CAPITA PRODUCTION OF STAPLE FOOD CROPS
IN HEARTH-OF-DOMESTICATION COUNTRIES**

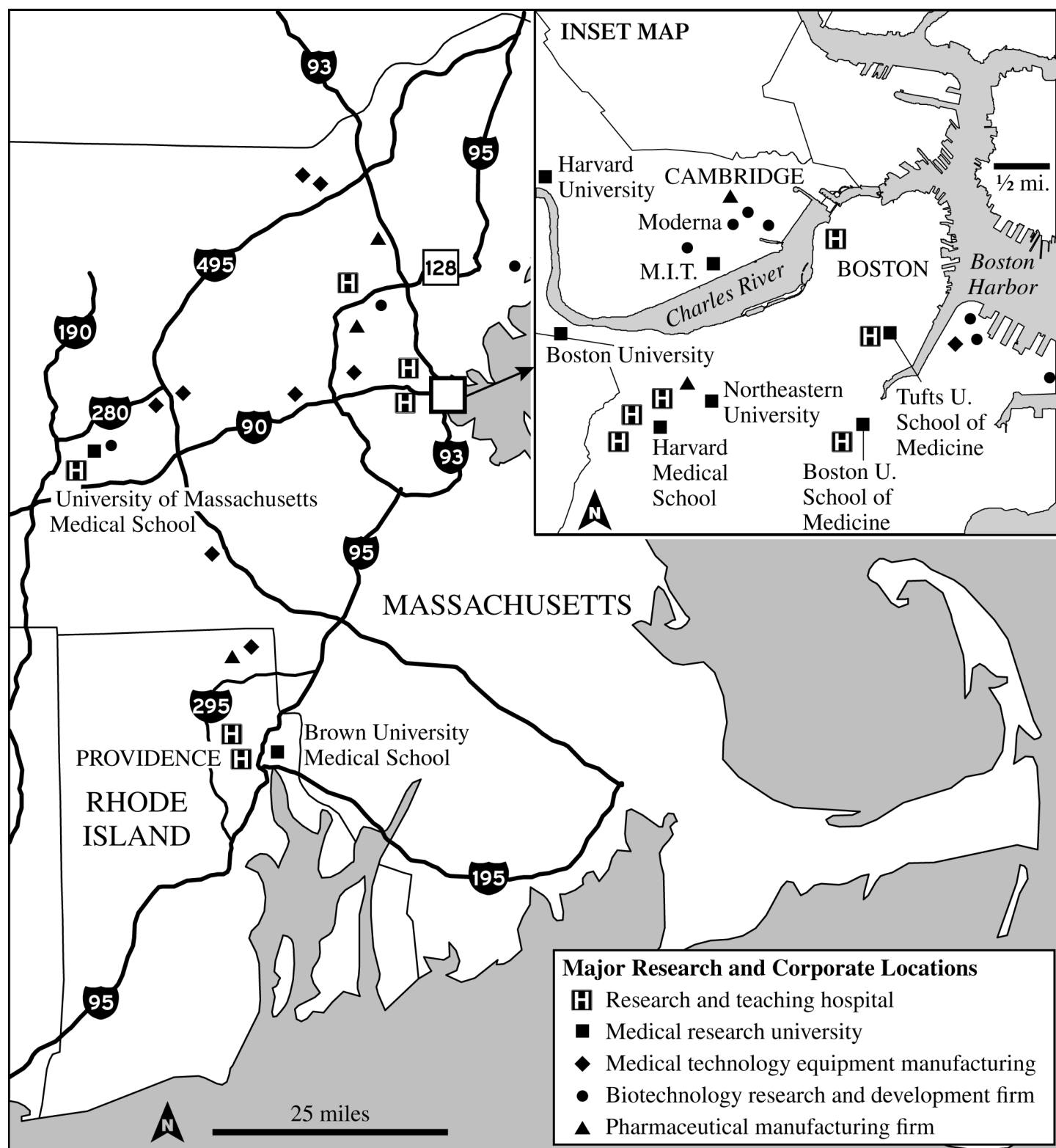
Country	Corn (maize) (pounds per capita)	Potato (pounds per capita)	Rice (pounds per capita)	Yam (pounds per capita)	Cassava (manioc or yuca) (pounds per capita)
	Hearth: Mexico	Hearth: Peru	Hearths: China and Mali	Hearth: Niger River basin	Hearth: Amazon River basin
Brazil	1,056	39	108	3	183
China	412	145	333	0	52
Mexico	471	31	4	0	0
Nigeria	121	15	93	549	618
Peru	107	362	216	0	13

Source: Food and Agriculture Organization of the United Nations

2. Staple food crops provide most of the carbohydrates in people's diets, and some staples are also used as animal feed or in the distillation of ethanol. Cassava is a root crop (tuber) that is the source of farinha, tapioca, and the pearls in bubble tea.
- A. Describe the concept of an early hearth of domestication.
 - B. Identify the crop listed in the table that has diffused the least from its hearth of domestication to the countries listed in the table.
 - C. Explain how food preferences can be a culture trait.
 - D. Explain how the Columbian Exchange contributed to a crop's diffusion beyond its hearth of domestication.
 - E. Explain how the data in the table support the concept of a crop's consumption pattern being the result of globalization.
 - F. Explain why a crop may be farmed intensively in a less developed country and be farmed extensively in a more developed country.
 - G. Explain ONE way the global supply chain links crops such as those listed in the table to consumers in other countries.

Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.

Question 3

MAJOR MEDICAL AND BIOTECHNOLOGY COMPANIES AND INSTITUTIONS IN THE BOSTON AND PROVIDENCE REGION

Source: National Institutes of Health

The inset map shows the downtown areas of Boston and Cambridge, Massachusetts.

3. Pastoral nomadism is widely practiced in the Sahel region of Africa. The map and table provide information about spatial patterns and social tensions associated with this type of agriculture.
- A. Describe ONE reason for the migration patterns shown on the map.
 - B. Describe ONE cause of desertification in the Sahel region.
 - C. Explain how pastoral nomadism may affect the cultural landscape of the Sahel region.
 - D. Explain ONE way mixed-crop farming could be affected by climatic conditions.
 - E. Using the map and table, explain why expanding protected natural areas may affect the migration routes of nomadic herders in the Sahel region.
 - F. Using the information in the table, explain why farmers' increased use of irrigation may increase conflicts with nomadic herders.
 - G. Explain the degree to which increased access to communication technologies may create cultural convergence among nomadic herders.

Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.

STOP

END OF EXAM