## Agriculture, Iron, and the Bantu Peoples

There is evidence of agriculture in Africa prior to 3000 B.C. It may have developed independently, but many scholars believe that the spread of agriculture and iron throughout Africa linked it to the major centers of the Near East and Mediterranean world. The drying up of what is now the Sahara desert had pushed many peoples to the south into sub-Sahara Africa. These peoples settled at first in scattered hunting-and-gathering bands, although in some places near lakes and rivers, people who fished, with a more secure food supply, lived in larger population concentrations. Agriculture seems to have reached these people from the Near East, since the first domesticated crops were millets and sorghums whose origins are not African but west Asian. Once the idea of planting diffused, Africans began to develop their own crops, such as certain varieties of rice, and they demonstrated a continued receptiveness to new imports. The proposed areas of the domestication of African crops lie in a band that extends from Ethiopia across southern Sudan to West Africa. Subsequently, other crops, such as bananas, were introduced from Southeast Asia.

Livestock also came from outside Africa. Cattle were introduced from Asia, as probably were domestic sheep and goats. Horses were apparently introduced by the Hyksos invaders of Egypt (1780-1560 B.C.) and then spread across the Sudan to West Africa. Rock paintings in the Sahara indicate that horses and chariots were used to traverse the desert and that by 300-200 B.C., there were trade routes across the Sahara. Horses were adopted by peoples of the West African savannah, and later their powerful cavalry forces allowed them to carve out large empires. Finally, the camel was introduced around the first century A.D. This was an important innovation, because the camel’s abilities to thrive in harsh desert conditions and to carry large loads cheaply made it an effective and efficient means of transportation. The camel transformed the desert from a barrier into a still difficult, but more accessible, route of trade and communication.

Iron came from West Asia, although its routes of diffusion were somewhat different than those of agriculture. Most of Africa presents a curious case in which societies moved directly from a technology of stone to iron without passing through the intermediate stage of copper or bronze metallurgy, although some early copper-working sites have been found in West Africa. Knowledge of iron making penetrated into the forest and savannahs of West Africa at roughly the same time that iron making was reaching Europe. Evidence of iron making has been found in Nigeria, Ghana, and Mali.

This technological shift cause profound changes in the complexity of African societies. Iron represented power. In West Africa the blacksmith who made tools and weapons had an important place in society, often with special religious powers and functions. Iron hoes, which made the land more productive, and iron weapons, which made the warrior more powerful, had symbolic meaning in a number of West Africa societies. Those who knew the secrets of making iron gained ritual and sometimes political power.

Unlike in the Americas, where metallurgy was a very late and limited development, Africans had iron from a relatively early date, developing ingenious furnaces to produce the high heat needed for production and to control the amount of air that reached the carbon and iron ore necessary for making iron. Much of Africa moved right into the Iron Age, taking the basic technology and adapting it to local conditions and resources.

The diffusion of agriculture and later of iron was accompanied by a great movement of people who may have carried these innovations. These people probably originated in eastern Nigeria. Their migration may have been set in motion by an increase in population caused by a movement of peoples fleeing the desiccation, or drying up, of the Sahara. They spoke a language, proto-Bantu (“Bantu” means “the people”), which is the parent tongue of a language of a large number of Bantu languages still spoken throughout sub-Sahara Africa. Why and how these people spread out into central and southern Africa remains a mystery, but archaeologists believe that their iron weapons allowed them to conquer their hunting-gathering opponents, who still used stone implements. Still, the process is uncertain, and peaceful migration—or simply rapid demographic growth—may have also caused the Bantu explosion.

Paragraph 1: There is evidence of agriculture in Africa prior to 3000 B.C. It may have developed independently, but many scholars believe that the spread of agriculture and iron throughout Africa linked it to the major centers of the Near East and Mediterranean world. The drying up of what is now the Sahara desert had pushed many peoples to the south into sub-Sahara Africa. These peoples settled at first in scattered hunting-and-gathering bands, although in some places near lakes and rivers, people who fished, with a more secure food supply, lived in larger population concentrations. Agriculture seems to have reached these people from the Near East, since the first domesticated crops were millets and sorghums whose origins are not African but west Asian. Once the idea of planting diffused, Africans began to develop their own crops, such as certain varieties of rice, and they demonstrated a continued receptiveness to new imports. The proposed areas of the domestication of African crops lie in a band that extends from Ethiopia across southern Sudan to West Africa. Subsequently, other crops, such as bananas, were introduced from Southeast Asia.

1. The word “diffused” in the passage is closest in meaning to （3）

○ emerged

○ was understood

○ spread

○ developed

2. According to paragraph 1, why do researchers doubt that agriculture developed independently in Africa?（2）

○African lakes and rivers already provided enough food for people to survive without agriculture.

○The earliest examples of cultivated plants discovered in Africa are native to Asia.

○Africa’s native plants are very difficult to domesticate.

○African communities were not large enough to support agriculture.

3. In paragraph 1, what does the author imply about changes in the African environment during this time period?（4）

○The climate was becoming milder, allowing for a greater variety of crops to be grown.

○Although periods of drying forced people south, they returned once their food supply was secure.

○Population growth along rivers and lakes was dramatically decreasing the availability of fish.

○A region that had once supported many people was becoming a desert where few could survive.

Paragraph 2: Livestock also came from outside Africa. Cattle were introduced from Asia, as probably were domestic sheep and goats. Horses were apparently introduced by the Hyksos invaders of Egypt (1780-1560 B.C.) and then spread across the Sudan to West Africa. Rock paintings in the Sahara indicate that horses and chariots were used to traverse the desert and that by 300-200 B.C., there were trade routes across the Sahara. Horses were adopted by peoples of the West African savannah, and later their powerful cavalry forces allowed them to carve out large empires. Finally, the camel was introduced around the first century A.D. This was an important innovation, because the camel’s abilities to thrive in harsh desert conditions and to carry large loads cheaply made it an effective and efficient means of transportation. The camel transformed the desert from a barrier into a still difficult, but more accessible, route of trade and communication.

4. According to paragraph 2, camels were important because they （4）

○ were the first domesticated animal to be introduced to Africa

○ allowed the people of the West African savannahs to carve out large empires

○ helped African peoples defend themselves against Egyptian invaders

○ made it cheaper and easier to cross the Sahara

5. According to paragraph 2, which of the following were subjects of rock paintings in the Sahara?（1）

○Horses and chariots

○Sheep and goats

○Hyksos invaders from Egypt

○Camels and cattle

Paragraph 3: Iron came from West Asia, although its routes of diffusion were somewhat different than those of agriculture. Most of Africa presents a curious case in which societies moved directly from a technology of stone to iron without passing through the intermediate stage of copper or bronze metallurgy, although some early copper-working sites have been found in West Africa. Knowledge of iron making penetrated into the forest and savannahs of West Africa at roughly the same time that iron making was reaching Europe. Evidence of iron making has been found in Nigeria, Ghana, and Mali.

6. What function does paragraph 3 serve in the organization of the passage as a whole?（2）

○It contrasts the development of iron technology in West Asia and West Africa.

○It discusses a non-agricultural contribution to Africa from Asia.

○It introduces evidence that a knowledge of copper working reached Africa and Europe at the same time.

○It compares the rates at which iron technology developed in different parts of Africa.

Paragraph 4: This technological shift cause profound changes in the complexity of African societies. Iron represented power. In West Africa the blacksmith who made tools and weapons had an important place in society, often with special religious powers and functions. Iron hoes, which made the land more productive, and iron weapons, which made the warrior more powerful, had symbolic meaning in a number of West Africa societies. Those who knew the secrets of making iron gained ritual and sometimes political power.

7. The word “profound” in the passage is closest in meaning to（2）

○ fascinating

○ far-reaching

○ necessary

○ temporary

8. The word “ritual” in the passage is closest in meaning to （3）

○ military

○ physical

○ ceremonial

○ permanent

9. According to paragraph 4, all of the following were social effects of the new metal technology in Africa EXCEPT:（1）

○Access to metal tools and weapons created greater social equality.

○Metal weapons increased the power of warriors.

○Iron tools helped increase the food supply.

○Technical knowledge gave religious power to its holders.

Paragraph 5: Unlike in the Americas, where metallurgy was a very late and limited development, Africans had iron from a relatively early date, developing ingenious furnaces to produce the high heat needed for production and to control the amount of air that reached the carbon and iron ore necessary for making iron. Much of Africa moved right into the Iron Age, taking the basic technology and adapting it to local conditions and resources.

10. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.（2）

○While American iron makers developed the latest furnaces, African iron makers continued using earlier techniques.

○Africans produced iron much earlier than Americans, inventing technologically sophisticated heating systems.

○Iron making developed earlier in Africa than in the Americas because of the ready availability of carbon and iron ore.

○Both Africa and the Americas developed the capacity for making iron early, but African metallurgy developed at a slower rate.

Paragraph 6: The diffusion of agriculture and later of iron was accompanied by a great movement of people who may have carried these innovations. These people probably originated in eastern Nigeria. Their migration may have been set in motion by an increase in population caused by a movement of peoples fleeing the desiccation, or drying up, of the Sahara. They spoke a language, proto-Bantu (“Bantu” means “the people”), which is the parent tongue of a language of a large number of Bantu languages still spoken throughout sub-Sahara Africa. Why and how these people spread out into central and southern Africa remains a mystery, but archaeologists believe that their iron weapons allowed them to conquer their hunting-gathering opponents, who still used stone implements. Still, the process is uncertain, and peaceful migration—or simply rapid demographic growth—may have also caused the Bantu explosion.

11. The word “fleeing” in the passage is closest in meaning to （3）

○ afraid of

○ displaced by

○ running away from

○ responding to

12. Paragraph 6 mentions all of the following as possible causes of the “Bantu explosion” EXCEPT （2）

○ superior weapons

○ better hunting skills

○ peaceful migration

○ increased population

Paragraph 6: The diffusion of agriculture and later of iron was accompanied by a great movement of people who may have carried these innovations. These people probably originated in eastern Nigeria. ■Their migration may have been set in motion by an increase in population caused by a movement of peoples fleeing the desiccation, or drying up, of the Sahara. ■They spoke a language, proto-Bantu (“Bantu” means “the people”), which is the parent tongue of a language of a large number of Bantu languages still spoken throughout sub-Sahara Africa. Why and how these people spread out into central and southern Africa remains a mystery, but archaeologists believe that their iron weapons allowed them to conquer their hunting-gathering opponents, who still used stone implements. ■Still, the process is uncertain, and peaceful migration—or simply rapid demographic growth—may have also caused the Bantu explosion. ■

13. Look at the four squares ■ that indicate where the following sentence could be added to the passage.

**These people had a significant linguistic impact on the continent as well.**

Where would the sentence best fit?（2）

14. **Direction:** An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. **This question is worth 2 points.**

Agriculture and iron working probably spread to Africa from neighboring regions.

●The use of livestock improved…

●The spread of iron working…

●Today's Bantu-speaking peoples…

Answer choices

○Once Africans developed their own crops, they no longer borrowed from other regions.

○The harshness of the African climate meant that agriculture could not develop until after the introduction of iron tools.

○The use of livestock improved transportation and trade and allowed for new forms of political control.

○As the Sahara expanded, the camel gained in importance, eventually coming to have religious significance.

○The spread of iron working had far-reaching effects on social, economic, and political organization in Africa.

○Today's Bantu-speaking peoples are descended from a technologically advanced people who spread throughout Africa.