

Imagine having to farm without any tools, doing everything by hand. Would planting, watering, and harvesting for an entire city even be possible? Without modern-day machinery, farming may seem like an impossible task. Yet, the early Mesopotamians were able to reap bountiful harvests with simple tools. Beginning with only sticks and stones, the early farmers soon found that they could use elements of nature in new ways to create farming tools. Even though these tools seem simple, they were still important technology. Technology is any application of knowledge to solve problems. Technology today includes tools like computers, but the simple technology from ancient Mesopotamia had the same effect as our technology today: it made life easier.

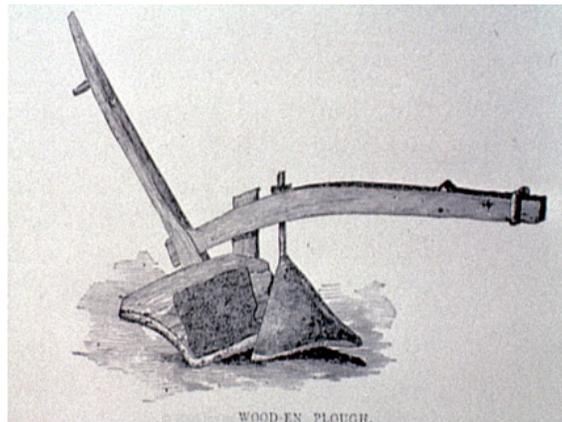
Mesopotamian settlers' only source of food was what they grew in the ground or raised on the land. Unlike us, they could not stock up on goods at the local grocery store! Goats and cattle were the most common meat. Dates and pomegranates were popular fruits. As time went on, farmers learned how to grow chickpeas, figs, flax, olives, and onions. Learning how to successfully grow food was a long, experimental process.

Tools for Sowing

Sowing, or planting, of the seeds was originally done by digging holes in the ground with sticks. Understandably, this took a long time, so farmers searched for ways to plant even faster. Soon the sticks were given handles and arranged in a V-shape. The bottom of the "V" would scrape into the ground so that a long ditch could be dug. The seeds would fall into the ditch. This new device was the earliest form of the plow.

Farmers could now walk from one side of the field to the other without having to bend down to break the soil. Pushing the plow through the thick, dry land was still very labor intensive, so the

Mesopotamians devised a way for animals to pull the plow down the field. Beasts of burden, such as cattle and oxen, were soon attached to the plow. This allowed greater force to be applied to the soil. Attaching animals also allowed for faster sowing of seeds. The efforts of the animals made the work less physically tiring for the farmer. The farmer needed only to walk behind the plow and steer it for greater precision.



WOOD-EN PLOW.

Early plows were made from wood. Later plows had copper parts, which broke up hard soil better.

Tools for Growing

An important element of agriculture is hydration, or keeping the crops watered. Most desert regions lack much rainfall, so growing healthy plants can be difficult. The Mesopotamians, however, had an advantage over other desert regions. The people there had two rivers, the Tigris and Euphrates, to use for irrigation, or to supply their plants with water. They used canals, or man-made waterways, as irrigation tools to channel water from rivers to crops. Irrigation helped keep the soil moist, and the river water delivered nutrients to the soil. This moist, nutritious farming soil is what earned the region the nickname “The Fertile Crescent.”

Conditions for growing food were so good that the Mesopotamians found themselves with a surplus, or extra, food. This surplus soon became an important part of the emerging trade process with neighboring cities. The canals that were once created solely for the purpose of irrigation soon became used for trade. By creating new and larger waterways, the farmers became tradespeople. They offered up their food surpluses for other food and materials that were not available in their own land.

Tools for Harvesting

When it came time to harvest, farmers would use a sickle to cut down sheaves, or bundles, of wheat. A sickle is a curved blade attached to a handle. It can cut down dozens of stalks of grain with one stroke of the arm. Some of the first sickles had blades made out of flint or polished stone. Later, farmers learned how to mold metals like copper and bronze. This helped to make tools more durable and efficient. Without sickles, wheat and other crops would have to be cut down or plucked only a few stalks at a time. Cutting down the crops could now be faster and less physically tiring.



Sickles with metal blades were more advanced, and developed later, than ones made with flint and stone.

To carry the freshly cut harvest back to the settlement, Mesopotamians used baskets made out of reeds. Reeds grew abundantly in the marshes of the rivers. They provided excellent material for collecting and carrying goods from the field. Reeds also quickly grew back. They grew naturally in the area and did not

have to be planted, watered, or harvested. All of these factors made reeds a valuable resource.

Back at the settlement, the harvest crop would begin its transformation toward the next day's meal. Stones were used to grind grains into flour and meats into smaller, edible pieces. Sometimes grains would be crushed between two stones. Other times a stone mortar and pestle were used. A mortar is a round, solid bowl. A pestle is a thick, baseball bat-shaped object that grinds food or plants against the inside of the mortar. The mortar and pestle did not fade away over time, and they have not changed much either. The two utensils are still found in kitchens around the world today.

With easier farming methods, days that were once spent entirely in the field could now be spent learning different skills. Farmers could now spend more time tending to livestock, crafting better tools, creating stronger baskets and cloth, and learning how to trade. The effect of their decision to trade their goods is the widespread recognition and survival of the popular fruits, vegetables, and grains that the world knows today.



A mortar and pestle were used to grind foods like seeds into small pieces or powder.

After reading the passage, answer the following questions:

- 1.** Early Mesopotamians used sticks to break up soil in order to plant seeds. What V-shaped tool did they invent to make planting seeds easier?
 - A.** sickle
 - B.** plow
 - C.** mortar
 - D.** pestle

- 2.** “Why are cattle and oxen considered beasts of burden?”
 - A.** They are expensive to raise.
 - B.** They perform hard labor for humans.
 - C.** They look sad.
 - D.** They are sacrificed in religious ceremonies.

- 3.** How did Mesopotamian agriculture affect trade with surrounding societies?
 - A.** Agriculture attracted traders from the East.
 - B.** Agriculture decreased trade.
 - C.** Agriculture didn’t affect trade at all.
 - D.** Agriculture increased trade.

- 4.** Humans have been using tools for thousands of years. How did tools improve the quality of life for Mesopotamians? Support your answer with details and ideas from the reading passage.