

**Ancient Agriculture—  
Part I: The Near East**

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Although we know a fair amount about the agriculture of the Greeks and Romans, we have very little evidence for the development of agriculture in pre-classical and prehistoric times. To find the origins of this legacy left to the Greeks and Romans, we must turn our attention to the Stone Age and the first settlements of the Eastern Mediterranean which were brought about by the advent of agriculture. It was here, in the ancient Near East, that the development of man's most important "invention" took place: the cultivation of plants and the domestication of animals.

Agriculture seems to have first developed in Neolithic times in a very productive area of land often referred to as the Fertile Crescent of the Near East. It encompasses, as the name implies, a crescent-shaped area extending northwest from the Persian Gulf to the Mediterranean and down almost as far as Egypt. It was in this fertile belt of land that, around 8000 BC, the people of the Near East changed from hunter-gatherers to a semi-agricultural community—perhaps because they found that, by protecting naturally growing plants which they found useful, they could then collect the seeds of these plants and grow their own crops.

Unlike Europe, where early man remained a nomad at this time, it appears that the Eastern Mediterranean area, with its ample sunshine and regular supplies of water from rainfall, springs and rivers, saw the first mixed economy with both hunting and agriculture taking place side by side. It seems likely that women were the first to clear areas of land for planting and harvesting the seeds of wild plants to use as a food source to supplement the game the men of the group brought in from the hunt. It also seems likely that these same Stone Age people began to feed and domesticate the wild animals which lived in the area, eventually using them for food, dairy products and clothing.

Once these Neolithic people started planting crops, they soon realized that gone were the nomadic days of the hunter-gatherer who moved from region to region following the herds. Crops, once planted and cultivated, had to be tended in one place and with this came the need to settle down into villages. It seems clear that, as part of changing from a hunting lifestyle to an agrarian one, people would have had to be able to afford the time to devise different crops and techniques which would eventually prove successful. Perhaps with the production and storage of agricultural

products, the Neolithic people of Mesopotamia and Egypt could provide themselves with an abundant supply of food year-round, despite any unforeseen climatic disasters. This cultivating and harvesting of crops required far more foresight and planning than a purely hunting lifestyle, and the need for such planning prompted the people of the ancient Near East to develop highly efficient solar and lunar calendars to keep track of Nature's cycles throughout the year. People had to know the best time of the year to plough, sow and harvest if successful crops were to be cultivated.

If people intended to reap the rewards of agriculture they first had to learn as much as they could about the plants which grew wild around the camps. They needed to know how to harvest the grain seeds for later planting as well as immediate use. In this respect, virtually all civilizations, both in the Old and the New World, have been based on cereals and grains, since these foods contain most of the nutrients necessary for sustaining life. Some of the earliest archaeological evidence we have of the first crops to be cultivated in the Middle East indicates that wheat and barley were probably the two most important cereal grains grown. These crops were grown in the Near East as far back as 6000 BC along with other plant species such as date palms, flax and various vegetables. Evidence from tombs and excavated villages shows us that the people of the fertile river valleys of the Near and Middle East were also successfully cultivating grapes, olives and figs.

Animals which once roamed wild were also being domesticated from very early on. By 4000 BC the Sumerians, for example, had domesticated cattle, sheep and goats to such an extent that a whole religion sprang from the worship of a Sumerian goddess in the form of a cow. By 3000 BC the Sumerians had a thriving dairy industry and oxen, horses and donkeys pulled their ploughs and carts. By learning to domesticate and breed these animals, man could use them for labour, food and clothing. As man learned more about the development of agriculture and the domestication of animals, he began to control Nature rather than being controlled by it.

Along with this new mindset and lifestyle came new agricultural tools for planting, cultivating, harvesting and processing the grain. Soon there followed new techniques for storing and transporting the grain as well. Methods for threshing and winnowing the grains were devised to separate the chaff from the grain. In early times threshing was generally done either by beating the grain with sticks or by the treading of cattle to separate the grain from the husk. Winnowing was then done by throwing both the grain and the husks into the air, with the light chaff of the grain being blown off by the wind and the grain itself falling to the ground. Processing and

grinding of the grain also required new methods to make it into flour for consumption. In the Middle East, grains were generally ground into flour using flat rectangular stones with a slightly concave inner surface over which small rubbing stones were pushed back and forth by hand to crush the grain.

Archaeological evidence supports the idea that baskets were used to store and transport the grains and flour from as early as 8000 BC in the area we now know as Iraq. Pottery for storage and transport did not come into common use until some time later, when it was discovered that by firing clay at a high temperature its property could be changed to almost that of stone. Up to this point, cooking of cereal grains was probably done by dropping hot stones into baskets, gourds or wooden vessels containing liquids and grains, but with the invention of pottery, the process of cooking was made much easier.

Around 5000 BC, irrigation systems were developed to grow crops in areas too far from usable water supplies, to help extend both the crop-growing season and the crop yield itself, and to make agriculture a more viable prospect for early civilizations. Although rivers of the Middle East, such as the Euphrates, could be used for the irrigation of fields, their flooding for the most part came irregularly—unlike the Nile of Egypt—and therefore elaborate techniques had to be developed to dike and channel these flood waters lest they overwhelm the farmlands. With the rise of irrigation came the further development of farming villages and eventually complex city-states sprang up in these same areas to produce some of the earliest civilizations the world has ever known.

Despite the annual flooding of the rivers of the Near East, it was necessary to irrigate the soil since the baking sun soon robbed the soil of its precious moisture. Unlike the Nile, the Tigris and Euphrates rivers had a tendency to flood unexpectedly. Therefore, the Mesopotamians had to devise systems of dams and canals to facilitate the irrigation of their fields and protect them from the danger of flood waters. Irrigation demanded a concerted and cooperative effort on the part of the early farmers, and the development of irrigation combined with the techniques of agriculture in a large village setting called for the establishment of laws and institutions to govern all those concerned. In Babylonia, for example, the court and the priests controlled the land, with tenant farmers cultivating most of the fields for the kings, nobles and priests. Whether the farmland was owned by freeholders or worked by tenants, all were required, under the Code of Hammurapi from around 1700 BC, to properly cultivate their fields and maintain their canals and dams or face harsh legal action. In both the Babylonian Empire of about 2000 BC and the Assyrian Empire of around

1000 BC, tenants and serfs were permitted to use government lands but were required to pay two-thirds of the crop as rent to the nobles. This kind of regulation of agricultural land and produce soon required elaborate administration to keep track of the amount of grain harvested and stored in state granaries, the amount paid in labour and rent by tenants and serfs, the amount of surplus grain which could be traded for other commodities, the livestock bought and sold, and any number of other items.

With irrigation, advancing agricultural techniques and cooperative control, it became possible to cultivate and harvest the fields year after year to sustain the growing populations of the newly-born villages springing up all over the Near and Middle East. Once the community had enough grain and livestock to feed itself, the surplus could be used for trade and exchanged for services now being offered by those individuals no longer directly needed in producing foods. People began to manufacture goods, such as pottery, woven material and metalwork, which could be used within the group or exchanged for other goods produced by other communities. Thus began a further important step on the road to "civilized" cultures: trade and commerce. However, problems began to arise with conflicts between neighbouring settlements. Since communities now depended on agriculture, the best way to overpower a population was to seize the village's farmland, so armies and defense strategies had to change with the advance of agriculture. Moreover, people and ideas began to migrate with traders and armies, and soon a great diffusion of agricultural techniques was taking place all over the known world.

In subsequent issues of *Labyrinth*, we will look at other cultures around the Mediterranean to see how they and agriculture grew and developed side by side.