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Graft and Corruption: On Olives and Olive Culture in the Pre-Modern Mediterranean

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Graft and Corruption: On Olives and Olive Culture in the Pre-Modern Mediterranean

John Gee and Daniel C. Peterson

In the background of Zenos's parable of the olive tree is a vastly important element of ancient society, olive culture. In both classical Roman and ancient Hebrew civilizations, the olive was viewed as first among trees.¹ In some ways, it is astonishing that the contemporary interest of American and other scholars in economic history has yet to chronicle or adequately describe something as important as olive culture in antiquity. Nevertheless, several facets of Zenos's parable shine with considerably more brilliance when placed against the background of ancient olive cultivation and trade. It is this background that we will explore in the present paper.²

LEXICOGRAPHY

There are four etymological stems referring to the olive in the ancient Mediterranean and Near East: (1) Sumerian *girim*, (2) Akkadian *serdu*, (3) West Semitic *zyt*, and (4) Greek *elaia*. The Sumerian *girim*, written with the LAGAB sign,³ probably indicates the shape of the fruit and thus might best be rendered "oval," or "ellipsoid," or even "berry."⁴ And, indeed, the Mesopotamians seem to have considered the olive a berry, as did the Chinese, the Anglo-Saxons, and

the Germans; the Romans, on the other hand, considered it a nut.⁵

The Akkadian *serdu*, listed as the second of our stems above, may well derive from the common West Semitic *zyt*, which is our third.⁶ The Hittites, an ancient Indo-European people of the Anatolian peninsula (modern-day Turkey), simply wrote the Akkadian word for olives;⁷ they borrowed the word as they had the product, for "the olive does not flourish on the highlands" of the Anatolian plateau.⁸ It is yet "another instance of the debt owed by the Hittite culture to its eastern neighbors."⁹ Semitic *zyt* is the source of Ugaritic (*zyt*), Hebrew (*zayit*), Egyptian (*ḏt* or *ḏdtw*),¹⁰ Coptic (*joeit*), Arabic (*zayt*), Persian (*zeitun*), Armenian (*jəṭ*),¹¹ and even Chinese (*ci-tun*) words for olives.¹² The Greek word is the source of the Etruscan (*eleivana*),¹³ Latin (*olea*) and subsequent Romance, and Germanic (Middle High German *olīve*),¹⁴ German (*Olive*), English ("olive"), Old Norse (*olifa*), and Icelandic (*olifa*) words for both olive and oil.¹⁵ From the philological evidence, it would seem that the olive originated in the area of Syro-Palestine, or possibly (though unlikely), in the Cyclades; the Near Eastern evidence antedates the Hellenic.

Most of the words for oil in these languages relate somehow to olive oil. The Greek term for "oil" (*elaion*; cf. English "oil" itself, as well as French *huile*), for example, comes from the word for "olive" (*elaia*); but not all *elaion* is olive oil.¹⁶ One of the most important Arabic terms for oil, in the sense of "petroleum," is *zayt*, from *zaytun* ("olive"). We leave it as an exercise for the interested reader to trace out the analogous etymological lines that run through the other languages.

ANCIENT OLIVE GROWING

The Mediterranean area constitutes a single "climatic region," marked by winter rains and long summer droughts, by light soils and dry farming for the most

part, in contrast to the irrigation farming on which so much of the ancient Near Eastern economy was based. It is a region of relatively easy habitation and much outdoor living, producing on its best soils, the coastal plains and the large inland plateaus, a good supply of the staple cereal grasses, vegetables and fruits, in particular grapes and olives, with suitable pasture for small animals, sheep, pigs and goats, but not on the whole for cattle. . . . The olive-tree flourishes even in summer drought but, though not labour-intensive, it demands attention and it requires time, since the tree does not bear for the first ten or twelve years.¹⁷

The olive tree¹⁸ thrives in the hot, dry summers and the often cool and sometimes damp winters of the Mediterranean area. Indeed, it can live to be a thousand years old, and some specimens in the region are even claimed to date from Roman times.¹⁹ The olive tree has a small core, a small central root with large twisting shallow roots radiating therefrom.²⁰ Its trunk is likely to produce bulges and abnormal growths in the stem, leaving it with a characteristically gnarled appearance.²¹ The olive is an evergreen, with a narrow leaf that is green on top but somewhat whiter on the underside and that grows at the end of a short twig. Olive flowers look much like olive leaves.²² The olive berry, which occurs clustered around the branches, consists of a firm flesh surrounding a pit.²³ Not surprisingly, Theophrastus, the fourth-century B.C. scholar who studied under Aristotle and succeeded him as the director of the Aristotelian school, reports that the fruit of the tree tastes "oily" (*elaiōdeis*).²⁴ So important was it in its traditional area that, for instance, no Roman garden was considered complete without at least some olive trees.²⁵ The olive does not, however, grow well far beyond the Mediterranean. Marcus Terentius Varro, a Roman writer of the first century B.C., recalled with perhaps

some surprise, "When I led the army near the Rhine in the interior of Transalpine Gaul, I was in many regions where neither vines, nor olives, nor fruit trees grew."²⁶ Varro's countrymen thought that the olive must have neither too warm nor too cold a climate, and neither too high nor too low an altitude, and supposed that it did not grow more than a hundred miles from the sea.²⁷

The ancient Romans, with their penchant for handbooks and manuals, wrote many treatises on horticulture for those of the nobility who had just come into their estates and had not the slightest idea how to run them.²⁸ The principal interest in farming was not to feed the hungry, but to fatten the wallet.²⁹ Olive oil was considered by many to be the equivalent of money, literally in liquid form.³⁰ In writing these manuals, they borrowed extensively from the works of their predecessors in Greece and Carthage. One of these was the Carthaginian Mago, who had written twenty-eight volumes on agriculture, a good many of which dealt with the olive.³¹ The Carthaginians, of course, being a Phoenician colony, had taken their olives and olive culture from Syro-Palestine. Thus the following summation, taken mainly from Greek and Roman records, is probably somewhat indicative of Palestinian olive culture as well. We note occasional parallels to Jacob 5, but emphasize that Joseph Smith could not have concocted Jacob 5 out of the four dry Romans and the pedantic Greek who are our sources.³²

General

A sizable plot of land in a Mediterranean climate with proper soil conditions is a prerequisite for good olive production,³³ and to grow olives Roman style (and likely Palestinian style as well), one needs several slaves or servants (cf. Jacob 5:7, 10–11, 15–16, 20–21, 25–30, 33–35, 38, 41,

48–50, 57, 61–62, 70–72, 75),³⁴ and several farm animals.³⁵ One also needs a fair amount of equipment.³⁶ Of course, the villa is placed uphill of the vineyards and fields,³⁷ and upwind of the manure pile. Olives should not be irrigated, as it spoils the fruit.³⁸

Wild versus Tame Olives

Olives, writes Theophrastus, come in two varieties: wild (*kotinos*) and tame (*elaa*).³⁹ “Wild plants seem to bear more, as the wild pear and olive, but the tame bear better fruit.”⁴⁰ Not only did the wild olive produce more than the tame, but it was more tenacious and hardy.⁴¹ Ancient authors knew very well that “it is not possible for a wild olive to produce tame olives” through any amount of cultivation,⁴² yet Theophrastus reports that “they say that certain such changes may occur by themselves (*automatān*), sometimes the fruit and sometimes even the whole tree, which the prophets (*hoi manteis*) think are signs (*sēmeia*). . . . Even from a tame olive may come a wild olive and from a wild olive may come a tame olive (though that is rare).”⁴³

Planting

Olive trees, the Roman guides inform us, should be planted in heavy, warm soil (for pickling, long, Sallentine, orcite, posea, Sergian, Columnian, and white varieties; thin, cold soil for the Licinian variety) about twenty-five to thirty (Roman) feet apart.⁴⁴ The land should be low lying, should face west, and should have good exposure to the sun.⁴⁵ Olives should be planted just after the vernal equinox.⁴⁶ Though olives may be propagated in nearly any way a plant may be propagated (including cases where an olive tree grew accidentally from an olive stake driven in the ground)⁴⁷—indeed, “the olive grows in more ways than any

other plant"⁴⁸—propagation by shoots and grafting was preferred to planting seeds, because seeds took so long to get going.⁴⁹ Seeds of tame trees also tend, if not carefully watched, to produce wild olives.⁵⁰

The olive would send forth a ring of shoots about the base and propagate itself that way, sometimes even swallowing objects.⁵¹ These shoots were taken from the base of the tree by first burying their tips into the ground so they would take root, and, two years later, digging them up and transplanting them.⁵² The slips should be one (Roman) foot long and should be planted (positioned as they were on the original tree) in trenches three and one half (Roman) feet deep and three (Roman) feet long.⁵³ The shoots should be spaded once monthly for three years.⁵⁴ Transplanting may take place in the autumn if the ground is dry; it is done much like the propagation of shoots, though the trees are pruned if they are broader than the palm.⁵⁵ Transplanted olives tend to have a rather delicate top that needs to be protected.⁵⁶

Grafting

Grafting was also to be done in the spring (in the dark of the moon).⁵⁷ A clean diagonal cut on the tree was preferable. The cultivator sharpened the end of the graft (which was, like the slips, one foot long), and then drove it into the tree, matching bark to bark. He smeared the joint with dung and dirt and, finally, bound it with some splints to support the graft.⁵⁸ Buds could also be grafted, so long as there was a bark to bark match.⁵⁹ Grafting, we are informed, increased the production of the trees.⁶⁰ Its importance in ancient Palestine is shown in the fact that it was regulated by Jewish law.⁶¹

Pruning

"All trees need pruning. . . . Androtion says that the

myrtle and the olive require the most pruning."⁶² The olive-grove must be pruned every few years.⁶³ The Roman proverb was, "He who ploughs the olive grove, asks for fruit; he who dungs, begs; but he who prunes, coerces fruit!"⁶⁴ This is so because the olive bears only on the previous year's wood.⁶⁵ According to the Roman manuals, olive yards should be pruned fifteen days before the vernal equinox, and trimmed for the next forty-five days.⁶⁶ According to Columella, a grower does not want one branch doing too much better than the others.⁶⁷ For the Jews, the Sabbatical year was not only a time of pruning olives but particularly for hewing them down to be cast into the fire.⁶⁸ During the trimming of the tree, what is not used for shoots is stacked outside on flooring, as what Cato terms "firewood for the master" (cf. Jacob 5:9, 42, 49);⁶⁹ the wood, being medium-grained, hard, crooked, brittle, and knotty, is good only for burning.⁷⁰

Digging

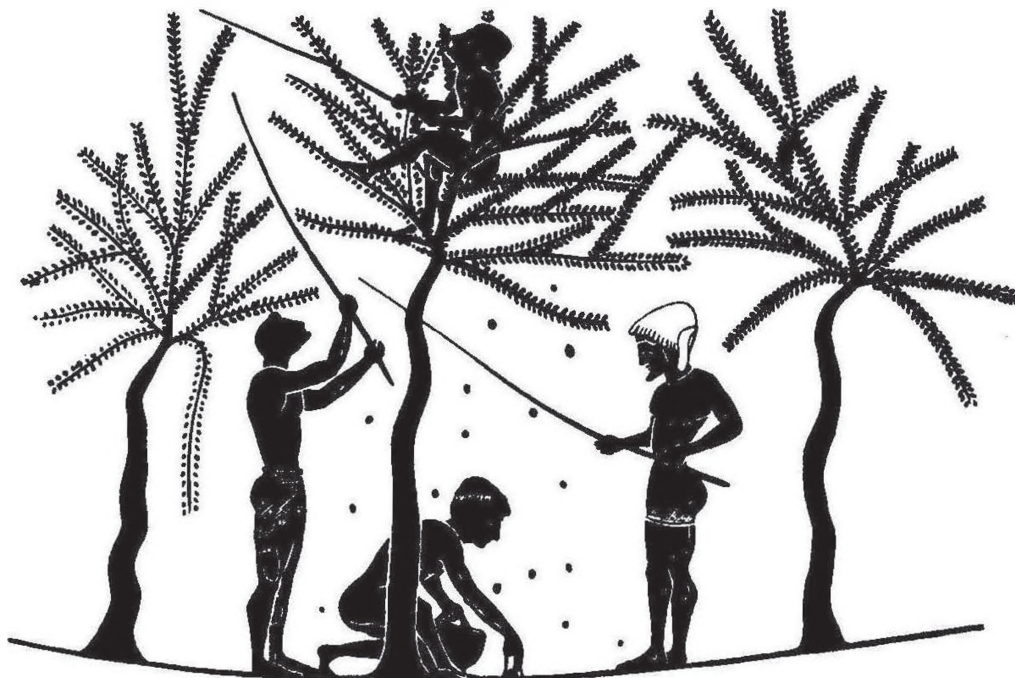
Trenches should be dug about olives in the spring, and again in autumn.⁷¹ Digging should be deep enough to keep the roots away from the surface but not so deep as to kill the tree.⁷² Hoeing should be done frequently.⁷³

Nourishing

Poor soil could lessen the olive crop, and for this reason, the trees were nourished.⁷⁴ Nourishing was done either by using the lees of the pressing process,⁷⁵ or by using lime as fertilizer.⁷⁶

Dunging

Manure was the reason the ancient olive grower kept all



Olive harvest, from a Greek black-figure vase (sixth century B.C.), shows workers knocking olives to the ground and picking them up by hand. In ancient Mediterranean economies, olives were one of the most valuable and useful crops.

those animals on his farm. So, when the weather was bad and he had nothing better to do, the prudent olive cultivator worked on his manure collection.⁷⁷ Olives, our classical experts inform us, should get one quarter of the farm's output of manure.⁷⁸ Pigeon dung, Varro explains, is the best,⁷⁹ while Columella recommends goat dung, and Androtion says that it does not matter so long as the dung is the most pungent available.⁸⁰ And, of course, manure should only be hauled in the dark of the moon.⁸¹ Though nourishing with vegetable fertilizer is done every year, dunging, thankfully, was recommended only for every third year.⁸²

Harvesting

Anciently, as it does today, harvest occurred late in the year, in September or October, when the fruit was not yet

fully ripe, or even during the winter, when the high winter winds whip through the trees.⁸³ The olives would drip oil when they were ripe,⁸⁴ but the best oil was made from unripe olives—just as they began to turn black, a stage the Greeks called *drypetides* and the Romans called *druppae*.⁸⁵ When harvest came, it was important to get the olives harvested before the wind knocked the fruit off the trees and bruised it; no one wants mushy olives.⁸⁶ Therefore, preparations had to be done in advance of the harvest.⁸⁷ As olives grow on top and all sides of the tree,⁸⁸ they were best picked from ladders instead of by shaking the trees (which might bruise the fruit). If the tree had to be shaken, prudent cultivators were advised not to do so by beating the tree. Otherwise, they might have to call in a tree-doctor and lose the next year's crop as well.⁸⁹ Should the *paterfamilias* so desire, he could hire out his harvesting or sell the olives to anyone willing to harvest them.⁹⁰

Pressing

“The preparation of olive oil requires even more skill than that of wine,” says Pliny.⁹¹ Immediately after harvesting, the olives should be pressed; oil thus expeditiously produced is better and less likely to be rancid.⁹² Numerous ancient devices for the production of olive oil have been found throughout the lands of the Bible. Essentially, there were two distinct processes. The first and simplest method was to tread the olives and then, when they were properly crushed, to place them into special baskets from which their oil could be drained into a basin. The top layer was then skimmed off. This was the Bible's “first oil” or “pounded oil,” which was used for lighting lamps (Exodus 27:20),⁹³ anointing,⁹⁴ and offerings;⁹⁵ the process is recalled in the prophet Micah's warning to the wicked that “thou shalt

sow, but thou shalt not reap; thou shalt tread the olives, but thou shalt not anoint thee with oil" (Micah 6:15, KJV). Another method, which has obviously left behind it more tangible archaeological remains, involved a huge stone wheel, which "pressed" the olives against a circular stone basin, the stone having been roughened and hardened on the surface.⁹⁶ The oil ran off through a groove in the basin and was then either allowed to sit so that the sediment would sink and the pure oil would rise to the top or was strained to separate the "pure" or "beaten" oil. With their tendency to value efficiency over elegance, the Romans preferred milling the olives to get their oil.⁹⁷

A second stage in the general process returned the olive pulp to its vat where it was heated and again crushed, this time by a large beam anchored in a wall niche and weighted down with stones. (Our Latin manuals insist, however, that olive *seeds* should not be crushed, lest the oil have a bitter flavor.)⁹⁸ The Romans preferred a lead cauldron to a copper one, because a copper cauldron gave the oil a bitter taste.⁹⁹ (The lead cauldron only gave them lead poisoning—*de gustibus non disputandum est.*) Smoke will also impart a bad taste.¹⁰⁰ The *amurca*—or lees, the watery fluid that was pressed out of the olives along with the oil, which settled—was boiled down to two-thirds of its original volume and was then stored in jars or earthenware.¹⁰¹ *Amurca* was used in moderate quantities as a fertilizer and herbicide—significantly, in larger quantities it functioned only as an herbicide and pesticide¹⁰²—and was also used to cure new jars.¹⁰³ The pressed olives were used for fertilizer.¹⁰⁴ The watchman generally took charge of the olive pressing, although it could be hired out, as well.¹⁰⁵ (It was in the latter business that the great pre-Socratic philosopher Thales became the richest man in Greece.)¹⁰⁶

A good tree could reasonably be expected to yield enough olives to produce ten to fifteen gallons of oil annually. (Rabbi Meir thought it impossible for an olive to be barren.)¹⁰⁷ In ancient Greece, wine production has been estimated to have averaged approximately 1140 liters or more per hectare, and olive oil at a tenth of that, or 114 liters per hectare.¹⁰⁸

Storage

The head of the household, our manuals advise, should have a well-built barn and plenty of vats to hold his oil and wine until prices are most favorable and he can make a killing in the market.¹⁰⁹ The storage cellar should be warm, flat, large enough to accommodate the harvest and located near the kitchen.¹¹⁰ Of course, the would-be speculator must not wait too long, as olive oil does not age well and goes rancid after a year—ancient storage being what it was. Therefore it was to be liberally used.¹¹¹ He should also store all the olives he can, so he can issue them, sparingly, to his hands.¹¹² Olives of the *orcite* and *posea* variety were preserved either green or in brine—or in oil, if bruised.¹¹³ Black *orcite* varieties could be salted and dried, or preserved in boiled must.¹¹⁴ White and black olives were steeped in salt before storage.¹¹⁵ Green olives, our advisors suggest, should be bruised and soaked in water several times and finally steeped in vinegar and salt. Of course, olives can be used in many recipes.¹¹⁶ The green variety, for instance, should be served with a fennel, mastic, and vinegar dressing.¹¹⁷

Seasons of the Year

An accomplished farmer, says Varro, can actually tell the seasons by watching olive leaves.¹¹⁸ The method, according to Theophrastus, relied upon the fact that the leaves

seemed to turn upside down after the summer solstice, leaving the lighter green side toward the sun.¹¹⁹ And, indeed, olive culture, as described by our classical Latin authorities, followed strongly seasonal patterns. Spring was the time for pruning, planting, grafting, nourishing, and digging around the olives, as well as for gathering firewood.¹²⁰ During the summer, by contrast, when the olive flowers, the trees required little care or attention.¹²¹ The pace picked up again in autumn, when trenches were dug around the trees and they were dunged.¹²² Rain after the flowering season could be devastating for the fruit.¹²³ (The richness of the harvest could also be adversely affected by diseases, by rain or winds at the wrong times, and by worms.)¹²⁴ Classical olive lore held that the fruit grew in size, though not in oil content, after the rise of Arcturus in mid-September.¹²⁵ Winter, as mentioned, was and is the harvest season for olives,¹²⁶ as well as the time when the oil is pressed.¹²⁷

DOMESTICATION OF THE OLIVE

Interesting and tantalizing questions surround the domestication of the olive, questions that are beyond the scope of this paper. Three observations, however, are relevant here. First, archaeological evidence is sometimes adduced to support the claim that the earliest domesticated olives known to us—supposedly to be distinguished from their wild relatives by the generally somewhat larger size of their pits—have been found at Chalcolithic sites from the fourth millennium B.C., like the modern Teleilat Ghassul near the northern tip of the Dead Sea. However, since the size of the pits of the olive offers no decisive indication of domestication or lack thereof,¹²⁸ archaeological evidence cannot at the present time determine the date at which

domestication of the olive first occurred. Therefore, all evidence on this question must be historical or philological. Second, although the earliest records of the olive from Mesopotamia (essentially, modern Iraq) date to Sargonic times (circa 2350 B.C.), they mention only the wood of the olive, and not the fruit.¹²⁹ This might be taken to imply that, at this period, the olive had not yet been domesticated. However, mention of *dt*-oil in the Pyramid Texts would seem to argue against such a conclusion, since the word *dt* can be plausibly linked with the West Semitic root for olives, *zyt*, mentioned previously.¹³⁰ Thus, *dt*-oil can be argued to be olive oil.¹³¹ The early date of the Pyramid Texts, if our identification of *dt*-oil with olive oil is accepted, would seem to cast doubt on the notion that the olive had not yet been domesticated by 2334–2151 B.C., and would suggest that the fact that the first Mesopotamian references to the olive refer to its wood rather than to its fruit may derive simply from accidents of historical preservation.¹³² We suggest it as likely, therefore, that olive cultivation was well established in the Near East by the Early Bronze Age (which is to say, in the third millennium B.C.). Although some have claimed priority for Greece and the Aegean islands as the location of earliest olive cultivation, these regions simply lack either the historical or philological evidence to establish this proposition, and, as the situation currently stands, the credit must go to the Near East.¹³³

THE SPREAD OF THE OLIVE

Olive products were first imported into Mesopotamia during the Sargonic period (ca. 2350 B.C.).¹³⁴ As noted immediately above, Mesopotamian evidence indicates that the olive was first imported for its wood and only later for its fruit and oil.¹³⁵ Assurnasirpal (883–859 B.C.) and Sennacherib

(704–681 B.C.) both attempted to cultivate olives in Assyria as part of the royal botanical gardens.¹³⁶ However, their attempts seem to have been unsuccessful, for, centuries later, Herodotus could report that olives had never grown in Mesopotamia.¹³⁷ (Sesame was the usual oil in Mesopotamia, occupying the place in culinary and other usage that was elsewhere largely reserved for olive oil.)¹³⁸ Nevertheless, it seems likely that the Hittites of Anatolia were introduced to olives by Mesopotamians, since Hittite texts (written in an Indo-European language but in a cuneiform script of Mesopotamian origin) use only a Mesopotamian (specifically a Semitic, Akkadian) term to describe the olive.¹³⁹ Mesopotamian olives, in turn, seem to have come from Murar and from Ugarit (modern Ras Shamra, on the Syrian coast), where they were everyday items of commodity exchange.¹⁴⁰

Olive oil is first attested in Egypt—apart from the Old Kingdom reference discussed above—in the Second Intermediate Period, when the Hyksos imported it into Egypt along with their rule.¹⁴¹ In general the Egyptians used *Moringa* oil, among others.¹⁴² The olive itself first appeared in Egypt during the Amarna period (circa 1350 B.C.) and is attested in the area of Thebes (modern Luxor) during the Twentieth Dynasty, or the Rameside era.¹⁴³ At first, the olives were brought into Egypt from Syro-Palestine and later from Greece.¹⁴⁴ Olive oil seems generally to have been “imported from Crete, Palestine, and the Aegean.”¹⁴⁵ Attempts were also made to *plant* olives in the Nile valley, but, as in the case of Mesopotamia, they never grew very well there—no matter how hard the Egyptians prayed—because there was simply not enough rainfall.¹⁴⁶ Rostovtzeff is quite correct when he points to the excellent climate of Egypt, to its steady water supply, its fertile and adaptable

soil. "Egypt in the eyes of the rest of the ancient world," he says, "was an agricultural Eldorado, a gift bestowed by the bountiful Nile on its people."¹⁴⁷ But, while it was marvelously suited to cereals, vegetables, grass, and fruit trees, the Nile valley was never very successful at producing olives. (Nor were its vineyards of much note.)¹⁴⁸

In the Hellenistic or Ptolemaic period, Greek settlers—often, in the earliest days, demobilized soldiers—brought with them their expertise in such arts as viticulture and olive growing and attempted to replicate along the Nile the life they had known in their native land. Landowners once again, they sought—apparently with the necessary approval of the government in the case of these particular crops—to produce the wine and olive oil, which they had come to value in their youth, and thus to eliminate the need of expensive imports.¹⁴⁹ Theophrastus reports that the olive did manage to grow in the area of Thebes, although the oil was of inferior quality. He does not, however, say that it grew very well.¹⁵⁰ And, in fact, domestic Egyptian production of olive oil seems never to have done away with the need for imports. Thus in Rostovtzeff's *Social and Economic History of the Hellenistic World* we read of one Apollonius, manager of affairs for one of the Ptolemaic kings, and of his regular shipments of Syrian incense, myrrh, wine, and olive oil.¹⁵¹

The olive appears to flourish best in the climate of Syro-Palestine, Greece, Italy, and Spain. We have already seen that both Egypt and Mesopotamia seem originally to have obtained their olives from the area of modern Syria, Lebanon, and Israel, and we now hazard the informed guess that Greece and Italy likewise owe their olive culture to that small area along the eastern coast of the Mediterranean. (Such diffusion of agricultural elements from the Syro-Palestine westward along the northern coast of the

Mediterranean is not without parallel. In somewhat later times, we know, the chicken was introduced into the Greek landscape from the Near East.)¹⁵² Indeed, if indications that wild olives grow only in northern Israel have any validity, we can infer with some confidence that the area of what would come to be known as the southern kingdom imported the tame olive from the area of the northern kingdom. The Mishnah states that the best olive trees for the making of oil are those of Tekoa (Teqoah), to the northwest of the Sea of Galilee, followed by those of Regeb (Regeb).¹⁵³ Thus, from the meager historical evidence, it would seem that it was *northern* Syro-Palestine that was the olive's native home.¹⁵⁴ This may help to explain why Lehi, with his background in the northern kingdom, appears to have had access to a parable of olive growing and why our modern Bible, with its background in Judea, lacks the parable of Zenos.¹⁵⁵

Though the earliest Greek records, the Minoan tablets in Linear B, mention olives,¹⁵⁶ Greek legends all point to an importation of the olive into Greece. However, the legends disagree as to the ultimate source of the olive tree, as well as on the question of the identity of the person who brought it into Greek-speaking territory and on the location that first enjoyed its benefits.

In the third of his *Olympian Odes*, the great poet Pindar (died 438 B.C.) alludes to a story according to which the "olive-spray" was brought by Heracles "from Ister, from the shady springs, as the best memorial of the Olympic games, obtained by persuading the Hyperborean folk who serve Apollo." Heracles had been rather embarrassed by the treelessness of Olympia, and, remembering an earlier adventure in the forests of Ister—in modern Rumania where the Danube River empties into the Black Sea and where a Greek colony was established sometime before 600 B.C.—had

determined to go there and bring back some foliage.¹⁵⁷ Thus, this tale supports the general notion that the olive tree was an import into the Hellenic world. But, according to Theophrastus, the olives at Olympia from which the wreaths were made were wild, not tame.¹⁵⁸ Thus, it is not particularly surprising to learn that, even in Roman times, the tribes of Ister were coming to Aquileia, at the head of the Adriatic Sea, to trade slaves, cattle, and hides for, among other things, wine and olive oil.¹⁵⁹ Their olives, like those that Heracles is supposed to have taken from them and brought to Olympia, must have been wild.

The Heracleian legend is not the only bit of Greek lore surrounding the entry of the olive into Hellenic territory. Most Greek sanctuaries, it will be recalled, were associated with sacred trees. In Athens, the holy tree was a sacred olive that grew on the Acropolis near the temple of Athena and was carefully tended in the sanctuary of the dew goddess, Pandrosos.¹⁶⁰ A famous Athenian legend recounts how the olive—the domesticated olive, not merely the wild olive—was a gift from the goddess Athena for the benefit of mankind. “When the gods in ancient times were quarrelling over the Attic land, Athena caused this tree to grow and thereby secured Athens for herself, while Poseidon, with the salt-water spring which he had struck from the rock, was obliged to stand down.”¹⁶¹ Therefore, the olive is sacred to Athena.¹⁶² “Together with Zeus she watches over olive trees in general.”¹⁶³ (To Minerva, the Roman syncretization of Athena, the olive was so sacred that goats were not sacrificed to her since it was believed that the goat’s saliva sterilized the tree.)¹⁶⁴ Just as the olive wreath was bestowed upon the winners at the Olympic games—which brought amazed comments from barbarian onlookers, who could not comprehend a competition for something other than

money and power—olive oil was the prize to the victors at Athena's festival, the Panathenaia.¹⁶⁵ All over Attica, *moriae* or sacred olive trees were assumed to be offshoots of the original tree planted by Athena on the Acropolis. Such trees, and even the stumps of such trees, were protected within fences and were regularly inspected by representatives of the ruling Athenian council—perhaps in the hope that they might revive in the same way that the olive tree in Athena's temple had returned to life after its burning by the Persian invader Xerxes. In earliest times, the penalty for removing a sacred olive tree or a sacred olive stump was death, but by the classical period the penalty had been reduced to mere exile and confiscation of property.¹⁶⁶

Whether imported wild into Olympia by Heracles or tame into Athens by Athena, the Greeks considered the olive a gift from the gods—and one, interestingly enough, granted specifically for cultic functions. The earliest references to olives and olive oil in the Linear B tablets are for cultic purposes.¹⁶⁷ Eventually, the cultivation of the olive spread to Miletus, the important Greek settlement in Asia Minor, and to such islands of the Aegean and the Mediterranean as Samos, Lesbos (notably in Mytilene), Rhodes, and Crete. (In the case of the latter two islands, at least, it may first have been introduced by the Phoenicians. Again, we note the connection with Syro-Palestine.)¹⁶⁸

The olive tree flourished with all this Greek attention. "There is not the slightest doubt," writes Rostovtzeff, "that even in the third century [B.C.] Greece was one of the best cultivated countries in the world. Her vineyards and olive-groves, her fruit-gardens and kitchen gardens were famous."¹⁶⁹ Ironically, if we are correct in seeing the east coast of the Mediterranean as the olive's original homeland, the Greek olive industry soon outpaced the Levantine cul-

tivators to whom, indirectly, it owed its existence. Relatively early in Athenian history, probably by the seventh century B.C., the desire of the upper class for luxuries led to a lucrative export trade with the Levant in olive oil, wine, and other agricultural products. Leading Athenian farmers, organized into commodity markets and possibly even into agricultural cooperatives, specialized in olive trees and vines. Olive culture and vine culture seem already before the time of the great sage Solon, a contemporary of Lehi, to have expanded at the expense of grain cultivation in the vicinity of Athens. Both vines and olive trees are suitable, after all, for stony and less fertile soils, and, as is evident throughout this paper, they are often associated with one another. However, Attic wine has never been especially highly esteemed, and it was first and foremost the cultivation of the olive that gave Athenian agriculture its economic clout. "When we come to consider Athenian exports," writes R. J. Hopper, "among natural products the oil obtained from the olive berry naturally occurs first to mind, owing to the traditional association of the city of Athens with the olive tree and fruit, the gift of Athena."¹⁷⁰

In the earliest days of their trade with Greece, Phoenician traders were content to accept slaves, hides, and cattle in exchange for their goods. It was not long, however, before Greece was able to add to these products of a relatively primitive economy excellent wine and olive oil. Such luxury goods—produced by Greek and, above all, by Athenian agriculture—played an important role in the life of the Syrian, Phoenician, and Palestinian cities. Greek wine- and oil-jars are often found in the tombs and the ruins of the Greek colonies in Syro-Palestine. And the consumption of wine and olive oil was not limited to the Greeks settled in these cities. Such jars have also been found in graves

that apparently do not belong to Greek immigrants. "A no less important customer was Egypt," notes Rostovtzeff, "where indeed Greek wine and olive-oil were probably consumed in larger quantities than in Syria, Phoenicia, and Palestine."¹⁷¹ (Rostovtzeff does not, however, seem to realize that the olive was native to Syro-Palestine and not to Egypt, and he therefore makes nothing of the distinction.)

A similar situation existed in the cities of Pontus, a region of northern Asia Minor, whose dependence upon the Greek motherland for these products extended from at least the sixth and fifth centuries B.C. into the Hellenistic period. Greek wine and olive oil also went to Sicily, while the tribes of south and central Italy; the Etruscans; the Celts of northern Italy and of Gaul; the Iberians of Spain; the Illyrians and the Thracians of the Adriatic coast, of the Danubian regions, and of the northern part of the Balkan peninsula; the Scythians of the south Russian steppes; the Lycians, Lydians, Phrygians, Thracians, and other peoples of Asia Minor, Egypt, Cyprus, Syria, Phoenicia, Palestine, Arabia, Mesopotamia, and even Iran—all became customers of Greece and absorbed steadily increasing quantities not only of Greek wine and Greek oil, but also of Greek industrial products. The high point of this Greek commercial expansion was reached in the fifth century B.C., following the Persian wars and the creation of the Athenian empire.¹⁷²

It is generally agreed that the olive was an import into Italy, where it arrived relatively early—apparently from Greece.¹⁷³ (A clue to this is the fact that the Etruscan word for "olive," *eleivana*, is borrowed from the Greek *elaia*, and that the name for the containing vessel was borrowed as well.)¹⁷⁴ Thus, if we are correct, the olive was merely continuing its westward migration from the Levant. Within Italy, its movement seems to have been from the south to the

north, which is not surprising in view of the history of Greek colonization in the area. It seems likely that "at a very early date the Greek cities of Southern Italy and of Sicily took up the culture of the vine and olive on an extensive scale in competition with their motherlands and with the Punic cities of Africa."¹⁷⁵ (Those Punic African cities, it will be recalled, were Phoenician colonies, and their olive culture, in an example of westward migration along the *southern* coast of the Mediterranean, was directly linked to Syro-Palestine.) It was not until the consulship of Pompey, in the first century B.C., that the production of olive oil within Italy proper was sufficient for export.¹⁷⁶

The rise of olive cultivation as a major factor in the Roman economy clearly had an effect on politics, as well. One example should serve to make this clear: Since business and war, economics and politics, can be closely connected, it should not surprise us that one of the principal targets of early Italian military raids was often the enemy's vineyards and olive groves.¹⁷⁷ Cato's famous dictum, *ceterum censeo delendam esse Carthaginem*, repeated at the end of every speech he gave in the Roman senate, may well have been uttered on behalf of a consortium of Italian landowners "endeavouring to get rid of a dangerous rival and to transform her territory from a land of gardens, vineyards, and olive-groves into one of vast cornfields."¹⁷⁸ Carthage, after all, had usually exchanged its wine and olive oil for Italian grain, and the ever-more-ambitious Romans and their allies seem to have felt that, since olives were more profitable than grain, they were getting the short end of the deal.¹⁷⁹ Italians had invested large amounts of land and money in the culture of olive and vine, and thus they willingly gave tacit support to Rome's ruthless policies against Carthage and against the spread of olive and vine

culture to the western provinces.¹⁸⁰ It did not matter that the best olives came from Africa;¹⁸¹ Roman olive growers and speculators, not surprisingly, were more interested in money. Even before the war, in Rome, you could buy anything in this world with olive oil.¹⁸²

The war, however, proved a boon to cultivation of the olive in Italy. Areas west and north of the Roman heartland soon became lucrative markets for the Roman olive in the absence of any Carthaginian competition. Gaul, for instance, was a rich country, very eager to buy wine and olive oil, which “it [could] not produce in sufficient quantities.”¹⁸³ Trade flourished. When Julius Caesar launched into his Gallic wars (58–51 B.C.), he could rely heavily on intelligence supplied by Roman merchants who had long preceded his army into that area of the world.¹⁸⁴

The Roman civil wars following Julius Caesar’s death did not alter the situation of Italian horticulture or olive culture to any great extent, at least not immediately.¹⁸⁵ Indeed, the disruptions that accompanied them may have hindered change. During the days of the early empire, olives were, with grapes, the principal crop of Italy, Greece, and Asia Minor and played the leading part in the economic life of these regions. It was these areas whose agricultural surplus provisioned the far-scattered Roman army. Greece and Asia Minor supplied the eastern provinces of Rome and the shores of the Black Sea—especially the northern shores, but also the ancient Ister on the west—with oil and wine. Italy itself was the chief source of supply for the Danubian provinces, as also for Germany, Britain, and Africa. Even Gaul and Spain continued to import these products from Italy, for a time.¹⁸⁶

With the emigration of Italians to the western provinces under Augustus and his successors, however, viticulture was

allowed to spread to Gaul. Olive culture spread to Africa and Spain, with many ambitious colonists drawn by the huge profits, there for the mere plucking, to enter into competition with the motherland. Italians moving into Histria (the Greeks' Ister) transformed "almost the whole of South Histria . . . into an olive plantation" modelled on Italian counterparts.¹⁸⁷ (And the olive oil from Histria could compete with the best from Italy.)¹⁸⁸ Dalmatia picked up the olive only after Roman occupation, but soon modelled its plantations after their predecessors in Italy and Histria.¹⁸⁹ Africa, famous for its olives not so many years before, became so again: "The production of large quantities of olive-oil . . . gave the cities of Tripolitania their wealth and prosperity, and enabled them to pay heavy tribute in cash to Carthage, to give [Augustus] Caesar an enormous contribution of olive-oil (three million *librae*), and later to make a voluntary gift of oil to Septimius Severus [died A.D. 211]," from which he financed his *sparsio*.¹⁹⁰ It is surprising to realize that, in imperial Roman times, there were "olive-groves, extending for mile after mile over regions where in our own days a few sheep and camels live a half-starved life in the dry prairie."¹⁹¹

While what now seems like a natural growth of olive culture into the western provinces "had been stunted first by the selfish policy of the agrarian magnates of the second century B.C., and then by the civil wars of the first century," such obstacles had now vanished.¹⁹² The resulting changes were swift in coming and, from the perspective of the old olive-growing areas, were serious and occasionally catastrophic.

By the end of the first century A.D., Greece and Italy and even Asia Minor were dependent for grain on other countries that produced it in large quantities, as they could not. Greece and Asia Minor were fed by southern Russia, while the Italian peninsula looked anxiously to Sicily, Sardinia,

Spain, Gaul, Africa, and Egypt for its support. The spread of the culture of vines and olive trees, both in the West and in the East, meant not only economic ruin for Italy (owing to a shortage of agricultural products for exchange), but could, in very rough times, result in a corn (grain) famine throughout the Empire, as indeed happened in A.D. 93.¹⁹³ Rome had claimed Egypt as a personal dominion of Caesar under Augustus, and thus had the bread basket of the empire to supply it, but Greece and Asia Minor, less fortunate, were obliged to tough it out with only the dwindling supplies from southern Russia. These were diminished still further by the imperial army's share, for the Roman government had prohibited "the export of corn [grain] from Egypt to other places than Rome save in exceptional cases."¹⁹⁴ "Thus over-production of wine and olive-oil both in the East and in the West meant a permanent crisis in the East."¹⁹⁵

Obviously, "the Roman government could not afford to let the Eastern provinces starve." Hence, emperors took measures to encourage grain production and to limit that of wine and oil. But little is known about such measures.¹⁹⁶ As moralists would have seen it, the greed abounding in Roman society had infected its agricultural base. Therefore, to stop the profiteering that he believed was starving the empire, Domitian (died A.D. 96) ordered a halt to all new vineyards and the destruction of half of the existing ones. (The decree was rescinded before its full execution). But Roman policy was inconsistent. Hadrian (died A.D. 138), for example, encouraged the cultivation of olives in Spain, Dalmatia, and Africa by means of his *Lex Manciana*.¹⁹⁷ And, in fact, Spanish olive oil was both better and cheaper than Italian, and popular preference for it contributed greatly to the prosperity of southern and western Spain.¹⁹⁸

In the meantime, the old native habitat of the olive had

undergone serious changes. The massive destruction of the Judean population during the two Jewish wars left now “a motley population of Syrians and Arabs” among the ruins to cultivate “the olive-tree, the vine, and cereals.”¹⁹⁹ Before that time these elements of traditional Syro-Palestinian agriculture had even grown on the Red Sea.²⁰⁰ As after Alexander’s wars some centuries earlier, a number of the veterans of these conflicts settled in Egypt, where they again tried to make the plots like home.²⁰¹ In the Fayyum, this meant olives, for “the soil [there] in most cases was not very suitable for corn [grain] but was excellent for vineyards or olive groves.”²⁰² Thus “a large part of this land was cultivated as vineyards, gardens, and olive-groves.”²⁰³ The soldiers got a tax break, but the Emperors could not afford to diminish their tax levies from Egypt during times of famine; Rome, after all, got its daily bread from Egypt, and the imperial court was dependent upon Egypt for the bread (if not for the circuses) that helped maintain its popular support in the capital. Therefore, the taxes on the rest of the Egyptian population increased. Not surprisingly, the peasants and small landowners bolted, leaving more and more of the burden on fewer and fewer people. The government in its turn responded with policies tying the farmers to the land—policies that, when allowed to run their full course, would produce serfdom in the West and would help to produce an Islamic East, rebellious against Roman regulations (and those of the Byzantine successor-state).²⁰⁴ In the short term, the policies produced new landowners, new vineyards, and new olive groves. But in the third century, Egypt became depopulated and the land went to waste: “Once flourishing vineyards and olive groves ran wild and could not easily be restored to their former fertility.”²⁰⁵

Yet the story of the olive was by no means over. After

the Roman empire imploded, the Arabs took the olive to Persia and eventually to China.²⁰⁶

ECONOMICS

The attention the olive received from ancient governments, some of which we have already noted, clearly illustrates its perceived importance. The great Athenian sage Solon ranked the citizens of Athens according to their revenues in measures of grain, olive oil, and wine. There were *pentekosiommedimnoi* ("500-measure men"), *hippeis*, who had at least three hundred measures, and *zeugitai* with two hundred.²⁰⁷ Among the regulations Solon issued were rules stipulating a minimum distance between plantings of olive trees.²⁰⁸ In Hellenistic Egypt, the oil business was "minutely monitored in every aspect by government officials, as is shown by an extraordinarily detailed set of Revenue Laws promulgated under Ptolemy II Philadelphus."²⁰⁹ Something of the effect of these laws is shown in the preserved correspondence of two officials discussing a woman accused of smuggling oil.²¹⁰ This was a crime unwittingly encouraged by the high tax on olive oil.²¹¹ The Roman emperor Hadrian regulated olive cultivation and the distribution of olive products in detail and issued an enactment in the early second century A.D. directing olive cultivators, dealers, and exporters to keep careful records of production and trade so that a one-third (or sometimes one-eighth) share could be made over to state oil buyers.²¹² Subsequently, due to a revolt in Egypt, the emperor Diocletian cracked down with "a coercive, omnipresent, all-powerful organization"; after A.D. 297, all olive trees had to be registered with the government.²¹³ The tax on olive oil was still in place in the seventh century, when Egypt was under Byzantine rule—but just prior to the Arab conquest.²¹⁴

“Oil-bearing plants” were an important factor in the prosperity—or lack thereof—of cities in the classical Mediterranean world. Indeed, there is a close correspondence between the area of the Mediterranean region where olives could be grown and the area of urbanization.²¹⁵ But such olive-induced prosperity could, in the eyes of prophets and moralists, become a serious temptation (Amos 6:6). Its sheer luxuriousness could lead its addicts into a life of neglect toward God and practical duties. “He that loveth pleasure shall be a poor man,” say the Proverbs. “He that loveth wine and oil shall not be rich” (Proverbs 21:17). Thus the Psalmist compares the beguiling words of an enemy to the softness of oil; a seductive woman’s mouth is smoother than oil (Psalms 55:21; Proverbs 5:3). Olive oil is one of the products listed by John the Revelator among the riches of Babylon (Revelation 18:12–13).²¹⁶

By and large, though, olive culture was an innocent and useful way to earn a living. Thales of Miletus, the great pre-Socratic philosopher, is a well-known example. Like his friend Solon, he was one of the seven famous Greek sages and roughly a contemporary of Lehi. But his affinity with Lehi may go even further than mere chronological proximity. Thales may have been of Semitic background himself; certainly his cosmology has Egyptian and Semitic affinities. Herodotus identifies him as being of “Phoenician stock,” which, if true, means that his ancestors came from the area of Tyre and Sidon in modern-day Lebanon. Which is to say that they came from precisely the area that we have already identified as the likely homeland of the olive and, thus, from within a relatively short distance of Lehi’s ancestors.²¹⁷ Thales had taken a great deal of ribbing for his otherworldliness—notoriously, he had fallen into a pit while contemplating the sky—and his poverty, according to his critics,

showed the futility of the philosophy and science to which he was devoted. So he set out to demonstrate that, if he put his mind to getting rich, he could easily do so. Foreseeing by his astronomical skills, while it was yet winter (thus almost a year in advance), that a good year for olives was in the offing, he rented all of the olive mills [*elaiourgeia*] in Chios and Miletus. Then, when a bumper olive crop created a huge demand for the services of olive mills, Thales the philosopher-monopolist made a fortune.²¹⁸ And he was not the only philosopher who is said to have dabbled in the olive business: Plutarch says that the illustrious Plato himself (died 347 B.C.) defrayed his travel expenses by selling oil in Egypt.²¹⁹ For all this, however, olive trees themselves played perhaps a less important role in trade than we might expect, precisely because everybody grew them.²²⁰ (It was for this reason, perhaps, that Solon of Athens banned the export of every fruit from Attica except olive oil. The land, Plutarch relates, was simply too poor to afford a surplus of anything besides olives.)²²¹

Nonetheless, olives and their products continued to be important items of trade. Olive oil was a major part of the annual payment sent by Solomon to Hiram of Tyre at the time he was building his temple (1 Kings 5:11). Later, during the building of the Second Temple, the Jews sent oil to the Sidonians and the Tyrians in exchange for cedar, just as Solomon had done (Ezra 3:7; cf. Ezekiel 27:17). But the fruit of the olive tree was commercially important domestically in Palestine, as well as internationally. The prophet Elisha, for instance, advised a certain widow to sell oil and, thereby, pay off her debts (2 Kings 4:7). And the foolish virgins, lacking oil, were told to replenish their supplies from a dealer (Matthew 25:8–9). The Jews of the first century A.D. were fastidious about the purity of their olive oil, so much

so that when the Jews in Caesarea Philippi were locked away, John of Gischala sought permission to sell them pure olive oil so that they might not have to purchase impure oil from the Greeks, though he did this, Josephus says, "Not out of piety but through blatant greed," since he sold it to them at a nine hundred percent profit.²²² This same greed is evident in Jewish legal interpretations that exempt them from leaving olives for the poor, while they keep the best olive oil for themselves, being forbidden to export it (Leviticus 19:9–10; Deuteronomy 24:19–22).²²³

In transport, olives were carried in jars (Egyptian *mn, ds*, or *gaja*, Greek *bikoi* or *moia*), the object being to "try to bring them as unbruised as possible," as one third-century B.C. Hellenistic Egyptian letter from a certain Leodamus admonishes its recipient, Laomedon.²²⁴ Athenian traders in the classical and Hellenistic periods used large pots or plain clay jars (*amphorae*) for the conveyance of liquids such as wine and olive oil.²²⁵

USES OF THE OLIVE

"As today in Mediterranean regions," writes archaeologist Suzanne Richard, "the olive in antiquity was the fruit par excellence; either the fresh fruit or its oil found a place at every meal."²²⁶ To the ancient Hebrews, olive oil was one of the necessities of life.²²⁷ Thus, when drought and famine had left the widow of Zarephath with virtually nothing else to eat, she still had "an handful of meal in a barrel, and a little oil in a cruse" (1 Kings 17:12, KJV).²²⁸ It was one of the provisions generally laid up in royal storehouses—along with grain and wine—against times of difficulty (2 Kings 20:13, KJV "ointment"; 2 Chronicles 11:11; 32:28; Isaiah 39:2). "There was hardly a phase of life not touched by the olive tree," Richard continues.²²⁹ Cambridge ancient historian M.

I. Finley agrees: "The ubiquitous olive—the chief source of edible fat, of the best soap and of fuel for illumination—is an essential clue to the Mediterranean life-style."²³⁰

Furthermore, because of the olive's role as a staple of Near Eastern diet, its omnipresence in the biblical landscape (where it clings even to rocky hillsides that defeat many other plants), its long life and consequent venerability, Richard observes, "It is no wonder it assumed an almost mythical character."²³¹ M. I. Finley, for instance, notes of the olive tree that, since it does not bear for the first decade or more of its life, it was in antiquity "a symbol of sedentary existence"—again, its link to urbanization—and "its longevity was celebrated."²³² And this image itself endured well beyond classical times. Edward William Lane cites the Arab grammarian and philologist al-Aṣmaʿī (died A.D. 831) to the effect that a single olive tree can live as long as thirty thousand years.²³³ Other classical Islamic scholars knew the olive as "the first tree that grew in the world, and the first tree that grew after the flood."²³⁴ In the biblical parable told by Jotham, when the trees seek to anoint a king from among themselves, it is the olive to whom they first offer the monarchy (Judges 9:8).

The importance of the olive tree, or *zaytūn*, in the Islamic Near East is apparent from the number of words connected with it and preserved in dictionaries of the classical Arabic language. Edward William Lane's *Lexicon*, for instance, knows such verbs—all manifestly related to the noun *zaytūn*—as *zāta* ("to anoint someone"), *zayyata* ("to furnish someone with olive oil"), *azāta* ("to have much olive oil"), *izdāta* ("to anoint oneself with olive oil"), and *istazāta* ("to seek or demand olive oil"). Separate words exist in classical Arabic for those who sell or press olive oil (*zayyāt*), for people who anoint themselves with it (*muzdāt*), and for food

that has been prepared using it (*mazīt* and *mazyūt*).²³⁵ The word *zayt* itself, which originally meant “olive oil” specifically, has now come to signify any kind of oil at all, and, as we have previously noted, has in fact become the most common single term for petroleum—a vitally important liquid of the contemporary Middle East.²³⁶

From earliest times—as in the case of the “freshly-picked olive leaf” brought by Noah’s returning dove—the olive was a symbol of divinely bestowed peace and bounty (Genesis 8:11, NJB). Thus, the *eiresione*, a branch of olive or laurel bound with ribbon and hung with various fruits at harvest festival time in ancient Greece, was clearly connected with the notion of agricultural prosperity.²³⁷ Thus, too, when the Persians burned down the temple of Athena in 480, the people of Athens nonetheless rejoiced to see the sacred olive tree burst into foliage. This demonstrated to them the continuing life of their beloved city.²³⁸

In the biblical world, the olive tree and its fruit were important elements of the promises given to ancient Israel (for example, see Deuteronomy 7:13; 8:8). Accordingly, in the blessing given by Moses to the children of Asher, the prophet asked God to grant certain things to that tribe. “Let him dip his foot in oil,” Moses prayed (Deuteronomy 33:24, KJV). Agricultural and human prosperity was a gift in the power of God to give or to withhold:

Your own labours will yield you a living,
 happy and prosperous will you be.
 Your wife a fruitful vine
 in the inner places of your house.
 Your children round your table
 like shoots of an olive tree. (Psalms 128:2–3, NJB.)

But when Israel failed to recognize the hand of God in granting these gifts, among which olive oil was an impor-

tant item, Israel sinned and was condemned—and the blessings were withdrawn (Hosea 2:8; Deuteronomy 28:51; Joel 1:10; Haggai 1:11). This was what made the suffering of Job so bitter: He had not sinned, but he was nonetheless deprived of the blessings that his righteousness should have brought. He longed for the days “when the Almighty was yet with me, when my children were about me: When I washed my steps with butter, and the rock poured me out rivers of oil” (Job 29:5–6). But Job’s was an anomalous situation, and the general biblical rule was that righteousness brings a plentiful harvest. Abundant stores of olive oil will be one of the glorious marks of the last days (Jeremiah 31:12; Joel 2:19, 24). Indeed, according to the shorter recension of the Slavonic 2 Enoch, an olive tree stands in Paradise next to the tree of life itself, “flowing with oil continually.”²³⁹

In the Qur’an, too, the olive is among the illustrations of God’s generosity to mankind. “He it is who sends down water from heaven,” says the Muslim holy book, which then quotes God as speaking of himself in the first person:

And with it we bring forth plants of every kind. We bring forth from it green herbs, from which we cause heaped-up grains to spring forth. And from the palm tree, from its flower-sheath, we call forth hanging clusters of dates. And [we cause to spring forth] gardens of grapes and olive trees [*zaytūn*] and pomegranates. . . . Look upon their fruit, when they bear fruit, and upon their ripening. Truly, in them there is a sign to people who have faith.²⁴⁰

At one point, in one of Muḥammad’s early revelations, the olive even figures as an element in a divine oath. “By the fig tree and the olive tree [*zaytūn*],” begins the ninety-fifth chapter of the Qur’an. “By Mount Sinai and this secure land!”²⁴¹

Although its native aesthetic endowment is rather limited, the rich and manifold utility of the olive tree gave it a unique beauty in the eyes of pre-modern Mediterranean peoples. Its wood was among the fine materials used to ornament the temple of Solomon (1 Kings 6:23, 31–33). To those who had turned from the paths of righteousness, Jeremiah recalled nostalgically that “ ‘Green olive-tree covered in fine fruit,’ was Yahweh’s name for you” (Jeremiah 11:16). And Hosea’s prophecy of the blessings to be poured out upon repentant Israel once again used the olive tree as a symbol of beauty:

I shall fall like dew on Israel,
 he will bloom like the lily
 and thrust out roots like the cedar of Lebanon;
 he will put out new shoots,
 he will have the beauty of the olive tree
 and the fragrance of Lebanon. (Hosea 14:6–7)

FOOD

Ancient Egyptians consumed olives, but, though they do occur in the later Jewish text known as the Mishnah, there are strangely few references to the use of olives or olive oil as a food in the Bible.²⁴² Still, it can be safely assumed, by analogy to modern practices, that such use was not uncommon. Furthermore, the manna cakes made by the Israelites during their Exodus are said to have tasted like “fresh oil” (Numbers 11:8). In the apocrypha, Judith, en route to the camp of Holofernes, carried a flask of oil among her provisions.²⁴³ Yigael Yadin thinks that the olive pits found in the so-called “Cave of Letters” in the Naḥal Hever were the remains of a meal, as they were found with dates, pomegranates, and nuts.²⁴⁴ In the rabbinic period, Jews used olive oil in the preparation of figs.²⁴⁵ The ancient Greek diet included only small amounts of meat (consumed mainly at

the barbecues that accompanied public sacrifices), but relied heavily for its protein content on cheese and on legumes, accompanied by certain other vegetables, by fruits such as figs and grapes, and by wine and olive oil.²⁴⁶

RELIGIOUS RITUAL

Olive oil is referred to in the Hebrew Bible as “the oil of gladness” (Psalms 45:7; Isaiah 61:3; cf. Proverbs 27:9). Well-kept Hebrews, says the book of Ecclesiastes, should always have it on their heads (Ecclesiastes 9:8; cf. Psalm 23:5),²⁴⁷ for oil, say the Psalms, makes the face “shine” (Psalms 104:15).²⁴⁸ Indeed, anointing oneself is a good practice even during a fast, according to the Sermon on the Mount (Matthew 6:17). It is especially appropriate after a bath and is thus often associated with acts of washing and clothing (2 Samuel 12:20; Ruth 3:3).²⁴⁹ So, too, a guest is highly honored when his host anoints him before a feast (Psalms 23:5; Luke 7:36–50; esp. 7:46). Of course, only olive oil may be used for anointing; other liquids, such as wine or vinegar, are inappropriate for such use.²⁵⁰ In Homeric Greece, as well, newly arrived guests at the house of a great king or lord are washed, anointed with olive oil, and clothed before they sit down to the banquet table.²⁵¹ In pharaonic Egypt and among the biblical Hebrews, this olive oil was often perfumed (Ruth 3:3).²⁵² The Romans thought olives warmed the body and protected it against the cold.²⁵³

Such apparently secular uses shade easily into purely religious ones. As the biblical parable of Jotham puts it, both God and man are honored by means of the olive (Judges 9:9). Its oil played a role in ritual sacrifice under the Mosaic law (see, for example, Exodus 30:22–33), as did olives themselves.²⁵⁴ “Cakes” made with oil were offered to God as part of Mosaic ritual, as were lambs prepared with flour and oil

and accompanied by a drink offering of wine (Leviticus 2:4; Exodus 29:38–41; Numbers 28:3–29:11). (Indeed, the descriptions of these offerings lead one to suspect that they parallel actual cooking recipes of the day.) Both the ancient Hebrew patriarchs and the ancient Greeks ritually poured olive oil over certain stones (cf. Genesis 28:18; 35:14).²⁵⁵ It was used in the ordination of priests and to anoint kings, possibly dedicating them to the Lord just as warriors' shields may have been dedicated (Exodus 30:22–33; Leviticus 8:10–12, 30; 1 Samuel 10:1; 16:1, 13; 1 Kings 5:1; 2 Kings 9:1–3, 6; 11:12; Isaiah 21:5; 2 Samuel 1:21).²⁵⁶ (Other vessels and utensils were also anointed, as was wool.)²⁵⁷ It is, thus, the olive that gives us the title of "Anointed One" (Greek *Christos*; Hebrew *Messiah*), so important in subsequent Jewish and Christian thought (cf. Isaiah 61:1).²⁵⁸

LAMPS

Olive oil as a substance used in lamps is attested in ancient Egypt, where it was mixed with salt.²⁵⁹ (Supposedly, salt prevents the oil from thickening.)²⁶⁰ Among the Hebrews of the Exodus, an eternal flame, presumably an olive oil lamp, was commanded to burn always in the sanctuary (Exodus 27:20; Leviticus 24:2). It is also well known in New Testament times.²⁶¹ One of the many things we can learn from the parable of the wise and foolish virgins is that, since the typical ancient lamp was rather small, prudent people should keep an adequate supply of oil on hand (Matthew 25:1–13). Olive oil continued to serve this function prominently in the Near East for many centuries, as is apparent not only in the famous medieval tale of Aladdin but in the much-beloved "Light Verse" of the Qur'an, which seems to recall the lamps of a Syrian Christian monastery:

God is the light of the heavens and the earth. The similitude of his light is as a niche, wherein is a lamp. The lamp is in a glass, and the glass is, as it were, a shining star. [It is] kindled from a blessed tree, an olive tree [*zaytūna*] of neither east nor west. Its oil [*zayt*] would almost glow forth even if no fire touched it. Light upon light. God guides to his light whomever he wishes. God strikes parables for the people, and God knows all things. [This lamp is found] in houses which God has allowed to be raised up so that his name may be remembered. Therein praise him, morning and evening, men whom neither commerce nor sale distracts from the remembrance of God, and from prayer, and from giving alms.²⁶²

More than one commentator, addressing this verse, could relate that the olive tree had been blessed by seventy different individuals among the Lord's prophets, among them Abraham and Muḥammad.²⁶³ Al-Zamakhsharī explains that the olive tree is called "blessed" (*mubāraka*) because of its "manifold uses" (*kathīrat al-manāfiʿ*).²⁶⁴ Interestingly, al-Zamakhsharī says that the claim that the olive tree referred to in the "Light Verse" is "of neither east nor west" means that it comes from Syria (*al-Shām*), by which he meant the modern area comprising Syria, Jordan, Lebanon, and Palestine. Further, he reports that the best olive trees are those of that region, and that their oil is the clearest and the purest.²⁶⁵ Another medieval commentator, al-Qurṭubī, thought that the tree's blessedness consisted in its remarkable ability to grow: "The olive is among the greatest of fruits in terms of growth." Its branches, he marvelled, burst into leaf from their tops to their bottoms. But al-Qurṭubī, too, was impressed by the multiple uses to which the olive tree and its products could be put. Not only is it used to light lamps, but it is the fatty substance (*idām*) used to moisten bread. It is used as an ointment (*dihan*) and

in the tanner's trade (*dibāgh*). Indeed, says al-Qurṭubī, there is not a part of the olive in which there is not some use.²⁶⁶

MEDICINAL USAGES

Olive oil was used for medicinal purposes in biblical Israel.²⁶⁷ It was thought to soften wounds, for instance, and was apparently imagined actually to soak deep into the bones when externally applied (Isaiah 1:6; Ezekiel 16:9; Luke 10:34; Psalms 109:18). Such use continued into post-biblical Judaism.²⁶⁸ And the rabbis also noted that olive oil could be used as a lubricant on a weaver's fingers.²⁶⁹ In New Testament times, as is well known, olive oil was used in the ritual anointing of the sick (Mark 6:13; James 5:14). Such applications of the olive to medicine were, of course, far from confined to the Judeo-Christian tradition. Sir James Frazer argued that the story of Leto—which in some versions has her clasping an olive tree as she is about to give birth to the divine twins Apollo and Artemis—points to an ancient Greek belief that certain trees ease the pain of child-bearing.²⁷⁰ The Romans thought it lowered fevers when applied to the head.²⁷¹ The twelfth-century Qur'an commentator al-Zamakhsharī relates a tradition according to which the Prophet Muḥammad described olive oil as a cure for hemorrhoids (*bāsūr*).²⁷²

Given what we have already seen of the centrality of the olive in Mediterranean economics, cuisine, and ritual, such medicinal use should, perhaps, not surprise us. Yet, with the passage of time, it took on an additional, theological, dimension that is worth mentioning. Mircea Eliade has shown how the cross of the crucifixion was assimilated, by many ancient and medieval Christian thinkers, to the tree of good and evil from the garden of Eden. The cross was, indeed, believed to have been made from the wood of that

tree, or from the tree of life, and thus became “the source of the sacraments (symbolized by olive oil, wheat, the grape) and of medicinal herbs.”²⁷³

FRUITS OF RESEARCH

Though we have been concerned in this essay with the economic history and historical background of the olive in the pre-modern Mediterranean, a brief note of *apologia* is perhaps not inappropriate here. Jacob 5 provides a classic example of Blass’s *Übereinstimmen in Kleinen* (verification in minutia).²⁷⁴ It purports to be the work of an ancient northern Israelite author, living between 900–700 B.C., about olive growing.²⁷⁵ Almost every detail it supplies about olive culture can be confirmed in four classical authors whose authority on the subject can be traced back to Syro-Palestine.²⁷⁶ Zenos’s parable fits into the pattern of ancient olive cultivation remarkably well. The placing of the villa above the vineyards²⁷⁷ means that, when the master gives instructions to his servants, they have to “go down” into the vineyard (Jacob 5:15, 29, 38). It was also customary for the master of the vineyard to have several servants (cf. Jacob 5:7, 10–11, 15–16, 20–21, 25–30, 33–35, 38, 41, 48–50, 57, 61–62, 70–72, 75).²⁷⁸ When only one servant is mentioned in Zenos’s parable, the reference is most likely to the chief steward. Likewise, Zenos’s mention of planting (Jacob 5:23–25, 52, 54), pruning (Jacob 5:11, 47, 76; 6:2), grafting (Jacob 5:8, 9–10, 17–18, 30, 34, 52, 54–57, 60, 63–65, 67–68), digging (Jacob 5:4, 27, 63–64), nourishing (Jacob 5:4, 12, 27, 28, 58, 71; 6:2), and dunging (Jacob 5:47, 64, 76), as well as the fact that dunging occurs less frequently in the parable than the nourishing, all mark it as an authentic ancient work. The unexpected change of wild olive branches to

tame ones (Jacob 5:17-18) would have seemed a divine portent to our ancient authorities.²⁷⁹

Even more striking, for Joseph Smith to have made up the parable from these classical authors, he would have had to read all four: Theophrastus is the only one to discuss the differences between wild and tame olives, the tendency for wild olives to predominate, and prophetic use of the olive tree as a sign.²⁸⁰ Varro and Columella are the only ones to acknowledge the Phoenician connections. Cato and Varro are the only ones who discuss the servants' roles. Cato and Columella alone note the placement of the villa above the groves; Varro is the only author to discuss the "main top" in association with the "young and tender branches" (cf. Jacob 5:6). Yet Joseph Smith probably did not have access to these works.²⁸¹ And even if he had, he could not read Latin and Greek in 1829.²⁸² Theophrastus's *Historia Plantarum* was first published in English in 1916,²⁸³ and no part of his *De Causis Plantarum* was available in English until 1927.²⁸⁴ While English translations of Cato, Varro, and Columella were available to the British in 1803, 1800, and 1745 respectively,²⁸⁵ it is hardly likely that they were widely circulated in rural New York and Pennsylvania. Joseph Smith could have known nothing about olives from personal experience, as they do not grow in Vermont and New York. Can it reasonably be supposed that Joseph simply guessed right on so many details? And even if he somehow managed to get the details from classical authors, how did he know to put it into the proper Hebrew narrative form?²⁸⁶

Even if Joseph Smith had somehow gathered the details of ancient olive culture from someone who knew it intimately, he would still have had no plot.²⁸⁷ Just as there is a vast difference between government technical manuals and a Tom Clancy novel, there is a world of difference between

the arid classical agricultural manuals and Zenos's parable. Zenos was not just another olive farmer; he had a tale to tell. Far from a yokel farmer spinning another yarn, Zenos was "a prophet of the Lord" (Jacob 5:2) speaking in the name of the Lord (Jacob 5:3). Parable is the medium and olive culture is merely the particular idiom. A knowledge of the idiom enhances understanding and appreciation of the nuances of the message, but it is not itself the message. As much as a knowledge of ancient olive culture aids in understanding Zenos's parable, ancient olive culture is not the message of the parable. The message is immensely important and "speaketh of things as they really are, and of things as they really will be" (Jacob 4:13); it is not left in the realms of subjective judgment.

While we will leave exegesis to others, we cannot help but notice peculiar details in the story. Particularly noteworthy is the fact that the earliest uses of the olive were generally sacral. Later, when its use was profaned, famines and wars soon followed. Like wickedness, the wild olive is more persistent and long-lived than its tame counterpart. But its fruit is worthless and undesirable. Holiness takes cultivated effort.

Notes

1. See Lucius Junius Moderatus Columella, *Rei Rusticae* V, 8, 1; Judges 9:8–9.

2. We concentrate on the premodern Mediterranean not only because "to ancient readers . . . knowledge and experience did not extend beyond the temperate regions of the Mediterranean" (John Boswell, *The Kindness of Strangers* [New York: Random House, 1988], 12), but also because olives did not extend beyond the temperate regions of the Mediterranean.

3. On the Sumerian terminology, see the equations LAGAB = lagab (PEa 33) = *la-kap-pu* "the LAGAB sign" (PAa 33:1), *up-qum* "block, stump (?)" (PAa 33:2, *up-qu* in Ea I.41); and LAGAB = ni-ge₆-en (PEa 30) = *la-wa-u-um* "to encircle, surround" (PAa 30:1), *sà-*

ha-rum "to turn to" (PAa 30:2, *ša-ha-ru* in Ea I.32), *ša-a-a-rum* "to besiege" (PAa 30:3), *e-ge-e-rum* "to twist" (PAa 30:4), *pa-ha-rum* "to gather" [cf. Egyptian *phr*] (PAa 30:5), *ka-lu-u-um* "to retain" (PAa 30:6). See Miguel Civil, *Materials for the Sumerian Lexicon* (hereinafter *MSL*), 17 vols. (Rome: Pontifical Biblical Institute, 1979), 14:31, 90, 177–78.

4. See Ea I.30b: LAGAB = *gi-ri-im* = *il-lu-ru* "berry" in *MSL* 14:196, but note the curious reading LAGAB = *gi-ri-in* = *el-lu* "pure" in Ea I.30; *MSL* 14:177.

5. Of course, the Romans also referred to the Mediterranean as *mare nostrum*. See HAR-ra-hubullu III.231–37, in *MSL* 5:112 where the classification of *giš.gi-rim* (GIŠ.GI.LAGAB) is first *inbu* "fruit tree" then *illuru* "berry" and finally *sirdu* "olive." Lise Manniche's claim in *An Ancient Egyptian Herbal* (Austin: University of Texas Press, 1989), 129, that the Sumerian word for "olive" is *giš-ì-giš* is unsupported. For the Sumerians, see *MSL* 14:196; for the Romans, see Varro, *Rerum Rusticarum* I.41.6.

6. Although the sound shifts involved are not standard and are not enumerated in Sabatino Moscati's *An Introduction to the Comparative Grammar of the Semitic Languages: Phonology and Morphology* (Wiesbaden: Harrassowitz, 1980), 27–37, 43–46, they might still be possible.

7. Hans G. Güterbock, "Oil Plants in Hittite Anatolia," in William W. Hallo, ed., *Essays in Memory of E. A. Speiser* (New Haven: American Oriental Society, 1968), 66–71. Due to the problems of the Hittite writing system, it is uncertain whether the word was a borrowing, or (more likely) merely a graphic convention hiding a native word.

8. O. R. Gurney, *The Hittites*, 4th ed. (Harmondsworth, Middlesex: Penguin, 1990), 66; cf. Theophrastus, *Historia Plantarum* IV, 4, 1.

9. Gurney, *The Hittites*, 70.

10. The Egyptian *ḏdtw* first appears in the late New Kingdom (Ramesside period); Renate Germer reads it as *ḏt* and identifies it as a Semitic loan word; see Renate Germer, "Olive," in *Lexikon der Ägyptologie*, 7 vols. (Wiesbaden: Harrassowitz, 1973–90), 4:567; so also Friedrich Junge, "Fremdwörter," in *Lexikon der Ägyptologie*, 2:324; though the Hebrew is misspelled, the mistake is righted in the corrigenda in *Lexikon der Ägyptologie*, 7:53.

11. The Armenian word is *jet*; see Berthold Laufer, *Sino-Iranica: Chinese Contributions to the History of Civilization in Ancient Iran*, Field Museum of Natural History Publication 201 (Chicago: Field Museum, 1919), 415.

12. For information about the Chinese olive, *gàn-làn* (*Canarium album*), see R. H. Matthews, *Chinese-English Dictionary* (Cambridge: Harvard University Press, 1969), #847-3, 1168-43, 1506-12, 2309-16, 3230, 3230-1, 3806-2, 3230-2, 3230-3, 3806. This, it should be noted, is not the same as the olive we are interested in, but because of the similar look of the fruits of these two trees, the Chinese today call the olive *gàn-làn*. The European olive (*Olea Europaea*) was brought into China by Persians who brought it from Syria, and it is called *ci-tun*; see Laufer, *Sino-Iranica*, 415-19. The encyclopedic Greek Theophrastus (*Historia Plantarum* IV, 4, 11; cf. Pliny, *Natural History* XII, 14, 26) knows of an Indian variety of the olive (*olea cuspidata*) that is fruitless, but this would seem to be neither the *gàn-làn* nor the *ci-tun*. Thanks to Tina Jenkins for first drawing our attention to this, and to David B. Honey for providing some valuable research material on the subject.

13. See Giuliano and Larissa Bonfante, *The Etruscan Language: An Introduction* (Manchester: Manchester University Press, 1983), 110. The words for both olive oil and the container that held it come from Greek.

14. Matthias Lexers, *Mittelhochdeutsches Taschenwörterbuch*, 37th ed. (Stuttgart: Hirzel, 1986), 155.

15. The Germanic comes via Latin; see Jan de Vries, *Altnordisches Etymologisches Wörterbuch* (Leiden: Brill, 1961), 418; Alexander Jóhannesson, *Isländisches Etymologisches Wörterbuch* (Bern: Francke, 1956), 1103; Geir T. Zoëga, *A Concise Dictionary of Old Icelandic* (Oxford: Clarendon, 1910), 321.

16. For "radish oil" (*elaiou rapha[ninou]*), see Papyrus Antinoopolis 99, line 9, in J. W. B. Barns and H. Zilliacus, *The Antinoopolis Papyri*, 3 vols. (London: Egypt Exploration Society, 1960-67), 2:113. For other types of oil, see Pliny, *Natural History* XV, 7, 24-32.

17. M. I. Finley, *The Ancient Economy* (Berkeley: University of California Press, 1973), 31. In the modern Middle East, too, the olive tree occurs largely in the "Mediterranean" area. Gerald Blake, John Dewdney, and Jonathan Mitchell, *The Cambridge Atlas of the Middle East and North Africa* (Cambridge: Cambridge University Press, 1987), 61.

18. Theophrastus, *Historia Plantarum* I, 3, 1, uses it as one of the principal examples of what it takes for a plant to be considered a tree.

19. Thus D. Kelly Ogden and Jeffrey R. Chadwick, *The Holy Land: A Geographical, Historical and Archaeological Guide to the Land of the Bible* (Jerusalem: n.p., 1990), 50.

20. Theophrastus, *Historia Plantarum* I, 6, 2-4; V, 5, 2-3.

21. *Ibid.*, I, 8, 6; IV, 14, 3.
22. *Ibid.*, I, 9, 3; I, 10, 2; 4; and 7; I, 13, 1-2.
23. *Ibid.*, I, 11, 3-4; Pliny, *Natural History* XIII, 12, 54; 19, 63; XV, 3, 9.
24. Theophrastus, *Historia Plantarum* I, 12, 1.
25. Varro, *Rerum Rusticarum* I, 7, 9.
26. *Ibid.*, I, 7, 8.
27. Columella, *Rei Rusticae* V, 8, 5; five days' journey from the sea, or three hundred stadia, is Theophrastus' estimation (*Historia Plantarum* IV, 4, 1; VI, 2, 4).
28. These manuals must have been for people who knew absolutely nothing about running a farm and had little to no common sense, for they are quite specific on exactly how to go about running a farm—one cannot help but pity the poor klutz who had to use them. But this is precisely what makes them so valuable to us here.
29. Varro, *Rerum Rusticarum* I, 23, 1.
30. Plautus, *Pseudolus* 209-24.
31. Varro, *Rerum Rusticarum* I, 1, 10; Columella, *Rei Rusticae* I, 1, 10 (our thanks to John Hall for pointing out this late and decadent Roman source to us); Klotz, "Mago (15)," in *Pauly-Wissowa*, 14:1:506-8.
32. Neither Cato, nor Varro, nor Pliny, nor Columella, nor Theophrastus is listed in the catalogue of books from the Manchester Public Library in Joseph Smith's day; see Robert Paul, "Joseph Smith and the Manchester (New York) Library," *BYU Studies* 22/3 (Summer 1982): 333-56. Of course, this is probably irrelevant because Joseph Smith translated the Book of Mormon in Harmony, Pennsylvania, three and a half days' journey from Manchester. We take no position, incidentally, on the horticultural accuracy or lack thereof in the classical accounts we are citing; we seek only to reproduce the ancient viewpoint.
33. Columella, *Rei Rusticae* V, 8, 5-7; Pliny, *Natural History* XV, 6, 20-21.
34. Cato, *De Agri Cultura* 10, gives the number as thirteen for 240 *iugera*, broken down as follows: one overseer, one housekeeper, five laborers, three teamsters, one muleteer, one swineherd (optional for Jews, we suppose), and one shepherd. Varro notes the problems with this number (*Rerum Rusticarum* I, 18), and, considering Cato's treatment of slaves (Plutarch, *Marcus Cato* IV, 3-5, 6), a few more might be desired. Jews seem to have hired their workers; Mishnah *Maaserot* 3:3.
35. Cato, *De Agri Cultura* 10. One needed 6 oxen, 4 donkeys, and 100 sheep, used for manure. Here too, Varro finds problems with this number because he says that Saserna says only two yoke of oxen are

needed for 200 *iugera* (Varro, *Rerum Rusticarum* I, 19, 1). Pliny includes bees (*Natural History* XI, 8, 18; 16, 46).

36. Cato, *De Agri Cultura* X, 2–5: five olive presses, one covered copper vessel (thirty quadrantal capacity), three iron hooks, three water pots, two funnels, one covered copper vessel (five quadrantal capacity), three hooks, one small bowl, two oil jars, one jar (fifty heminae capacity), three ladles, one water bucket, one basin, one small pot, one ewer, one platter, one chamber vessel, one watering pot, one ladle, one candlestick, one sextarius measure, three large carts, six ploughs and ploughshares, three yokes with straps, six sets of oxen harnesses, one harrow, four manure hampers, three manure baskets, three pack saddles, three pads, tools, eight pitch-forks, eight hoes, four spades, five shovels, two rakes, eight scythes, five straw-hooks, five pruning-hooks, three axes, three wedges, one quern, two tongs, one poker, two braziers, one hundred oil jars, twelve pots, ten grape pulp jars, ten *amurca* jars, ten wine jars, twenty grain jars, one lupine vat, ten large jars, one wash-tub, one bath-tub, two water-basins, covers for jars and pots, one donkey mill, another quern, one Spanish mill, three collars and traces, one small table, two copper disks, two tables, three large benches, one bedroom stool, three stools, four chairs, two arm chairs, one bed, four hammocks, three common beds (eight beds for thirteen slaves? One suspects that Cato's reputation for treating slaves poorly was well deserved), one wooden mortar, one fuller's mortar, one loom, two mortars, four pestles (for beans, grain, seed, kernels) one modius measure (see Matthew 5:15; Columella, *Rei Rusticae* XII, 52, 8, actually thinks three of these are a minimum), one half modius, eight mattresses, eight blankets (for the eight beds), sixteen cushions, ten table cloths, three napkins, six hoods; cf. Varro, *Rerum Rusticarum* I, 22, 3. The olive cellar should have oil jars and covers, fourteen oil vats, two large and two small oil flasks, three copper ladles, two oil amphorae, one water-jar, one jar (fifty heminae capacity), one sextarius oil-measure, one pan, two funnels, two sponges, two earthenware pitchers, two half-ampora measures, two wooden ladles, two locks with bars for the cellar, one set of scales, one one-hundred (Roman) pound weight, and other weights; see Cato, *De Agri Cultura* XIII, 2–3. Varro thinks that the reason Cato recommended having so much more equipment than any other author is so that the farmer (Cato) would not have to sell his wine every year; old wine sells better than new (Varro, *Rerum Rusticarum* I, 22, 3–4; see also Luke 5:39).

37. Columella, *Rei Rusticae* I, 5, 7; cf. Theophrastus, *Historia Plantarum* II, 5, 7.

38. Pliny, *Natural History* XV, 2, 6.
39. Theophrastus, *Historia Plantarum* I, 14, 4.
40. *Ibid.*, I, 4, 1; III, 2, 1.
41. *Ibid.*, IV, 13, 1; IV, 14, 12.
42. *Ibid.*, II, 2, 12. Drastic measures can, however, improve the quality of wild olives from worthless to very poor.
43. *Ibid.*, II, 3, 1.
44. Cato, *De Agri Cultura* VI, 1–2; Columella, *Rei Rusticae* V, 10, 5–6; on the large number of varieties, see Columella, *Rei Rusticae* V, 8, 3–4. Sixty (Roman) feet apart according to Columella, *De Arboribus* XVII, 3; nine (Greek) feet apart according to Theophrastus, *Historia Plantarum* II, 5, 6. For Jewish measurements see Mishnah *Kilayim* 4:1–9, *Shebiit* 1:2–7.
45. This assumes that the olives are being planted on an incline. Cato, *De Agri Cultura* VI, 2; cf. Varro, *Rerum Rusticarum* I, 23. On the low-lying land, see Theophrastus, *Historia Plantarum* II, 5, 7.
46. Varro, *Rerum Rusticarum* I, 30; Cato, *De Agri Cultura* LXI, 2.
47. Theophrastus, *Historia Plantarum* II, 1, 1–2; V, 9, 8; cf. Pliny *Natural History* XV, 57, 131–32. Mishnah *Orlah* 1:5 probably refers to the olive tree.
48. Theophrastus, *Historia Plantarum* II, 2, 3.
49. Varro, *Rerum Rusticarum* I, 41, 6; Columella, *Rei Rusticae* V, 9, 1–7. This is recalled at Romans 11:17–24 and, of course, in Jacob 5.
50. Theophrastus, *Historia Plantarum* II, 2, 5.
51. *Ibid.*, V, 2, 4; cf. Pliny, *Natural History* XVI, 56, 128. Mishnah *Shebiit* 1:8 probably refers to olives.
52. Cato, *De Agri Cultura* LI, 133; five to seven years in Jewish reckoning; Mishnah *Shebiit* 1:8.
53. Cato, *De Agri Cultura* XLIII, 1, 45; cf. Columella, *Rei Rusticae* V, 9, 8–11; X, 7. Four feet deep according to Columella, *De Arboribus* 17, 2.
54. Cato, *De Agri Cultura* XLIII, 2.
55. *Ibid.*, 27–28; cf. Columella, *De Arboribus* XVII, 1; Columella explicitly identifies this information as coming from Mago. See also Mishnah *Shebiit* 2:6.
56. Varro, *Rerum Rusticarum* I, 47. The Mishnah accords special status to the olives from the crown of the tree, and special efforts were made to keep them from the poor (Mishnah *Peah* 7:2; 8:3).
57. Cato, *De Agri Cultura* XLI, 2; Varro, *Rerum Rusticarum* I, 41, 1.
58. Theophrastus, *Historia Plantarum* II, 5, 3; Cato, *De Agri Cultura* XLI, 2–4; Varro, *Rerum Rusticarum* I, 40, 4; XLI, 1–2; Mishnah *Shebiit* 2:4, but see 4:5.
59. Cato, *De Agri Cultura* 42.

60. Columella, *Rei Rusticae* V, 9, 16.
61. According to Mishnah *Kilayim* 1:7, Zenos's mention of grafting wild olives and tame olives may have been illegal, depending on whether the rabbis held that wild and tame olives were different species.
62. Theophrastus, *Historia Plantarum* II, 7, 2–3; Vergil says the opposite: *Contra non ulla est oleis cultura, neque illae procurvam exspectant falcem rastosque tenacis, cum semel haeserunt arvis aurasque tulerunt. ipsa satis tellus, cum dentis reluditur unco, sufficit umorem et gravidas, cum vomere, fruges. hoc pinguem et placitam Paci nutritor olivam.* Vergil, *Georgics* II, 420–25; cf. Pliny, *Natural History* XV, 2, 4.
63. Columella, *Rei Rusticae* V, 9, 15.
64. *Ibid.*: *eum qui aret olivetum, rogare fructum; qui stercoret, exorare; qui caedat, cogere.* Cf. Theophrastus, *Historia Plantarum* IV, 16, 1.
65. Theophrastus, *Historia Plantarum* I, 14, 1.
66. Cato, *De Agri Cultura* 44; starting early is emphasized, 32; for Jewish law see Mishnah *Shebiit* 2:2–3; 4:10.
67. Columella, *De Arboribus* 17, 3; this sounds a lot like C. S. Lewis, *The Screwtape Letters* (New York: Macmillan, 1961), 161–70.
68. Mishnah *Shebiit* 4:4.
69. Cato, *De Agri Cultura* 55; cf. Mishnah *Shebiit* 4:1.
70. Pliny, *Natural History* XVI, 76, 206; Theophrastus, *Historia Plantarum* I, 5, 4–5; VIII, 1–5; III, 6, 2; V, 3, 3; VI, 1; “fig and olive are best to be burned,” though not as kindling (V, 9, 6–7). It also does not rot easily; *ibid.*, V, 4, 2 and 4; Pliny, *Natural History* XVI, 78, 212; 79, 219. It could be used for hammer hafts if it were big enough; Theophrastus, *Historia Plantarum* V, 7, 8; cf. Pliny, *Natural History* XVI, 84, 230. According to Rabbi Simeon ben Gamaliel, if a married woman acquires an olive tree, it is to be sold as wood; Rabbi Judah forbids their sale because “they are the glory of her father’s house”; Mishnah *Ketuboth* 8:5.
71. Cato, *De Agri Cultura* XL, 1, 27; Columella, *Rei Rusticae* V, 9, 12–13; Jewish provisions in Mishnah *Shebiit* 1:1, 4, 6–7.
72. Cato, *De Agri Cultura* LXI, 1. This might be the best interpretation of Vergil, *Georgics* II, 420–25, cited above.
73. Cato, *De Agri Cultura* LXI, 2; Mishnah *Shebiit* 2:2.
74. Columella, *Rei Rusticae* V, 9, 16.
75. Varro, *Rerum Rusticarum* I, 55, 7; cf. Cato, *De Agri Cultura* 93; Columella, *Rei Rusticae* V, 9, 16–17.
76. Columella, *Rei Rusticae* V, 9, 17.
77. Cato, *De Agri Cultura* XXXIX, 1; cf. Mishnah *Shebiit* 3:4.
78. Cato, *De Agri Cultura* 29; cf. Mishnah *Shebiit* 3:2–3.

79. Varro, *Rerum Rusticarum* I, 38, 1. This explains the large dove cotes in the ancient world; for a picture, see Hugh Nibley, "Rediscovery of the Apocrypha and the Book of Mormon," in *Temple and Cosmos*, vol. 12 in *The Collected Works of Hugh Nibley* (Salt Lake City: Deseret Book and F.A.R.M.S., 1992), 222.

80. Columella, *Rei Rusticae* V, 9, 14; Androtion, as cited in Theophrastus, *Historia Plantarum* II, 7, 3.

81. Cato, *De Agri Cultura* 29.

82. Columella, *Rei Rusticae* V, 9, 13; more frequently in Mishnah *Shebiit* 2:2; 3:1.

83. Cato, *De Agri Cultura* III, 2–3; XXXI, 2; Pliny, *Natural History* XV, 2, 5; Colin Renfrew and Malcolm Wagstaff, eds., *An Island Polity: The Archaeology of Exploitation in Melos* (Cambridge: Cambridge University Press, 1982), 121. Different varieties were harvested at different times; Pliny, *Natural History* XV, 4, 13–14.

84. Mishnah *Peah* 7:1–2.

85. Pliny, *Natural History* XV, 2, 5–6.

86. Cato, *De Agri Cultura* III, 2–3, 64; Papyrus Hibeh 49, in Bernard P. Grenfell and Arthur S. Hunt, *The Hibeh Papyri*, 2 vols. (London: Egypt Exploration Society, 1906), 1:192–93; Pliny, *Natural History* XV, 6, 21.

87. Cato, *De Agri Cultura* 31.

88. Theophrastus, *Historia Plantarum* I, 14, 2.

89. Varro, *Rerum Rusticarum* I, 55, 2–3: *gravior enim plaga medicum quaerit*. See also Pliny, *Natural History* XV, 3, 11–12. One method of dealing with sick trees is given in Cato, *De Agri Cultura* 93.

90. Cato, *De Agri Cultura* 144 and 146 (in each case, complete with ready-made contract). On Jewish practice, see Mishnah *Demai* 6:5, 7; *Maaserot* 3:3.

91. *Arsque vel maior olei musta temperandi: ex eadem quippe oliva differunt suci*. Pliny, *Natural History* XV, 2, 5.

92. Cato, *De Agri Cultura* III, 3–5, 64–65; Varro, *Rerum Rusticarum* I, 55, 1 and 6; Pliny, *Natural History* XV, 2, 5.

93. Mishnah *Menahot* 8:4–5.

94. Mishnah *Shebiit* 4:9; *Maaserot* 4:1.

95. Mishnah *Terumot* 1:8–9; *Bikkurim* 1:3.

96. Varro, *Rerum Rusticarum* I, 55, 5; Mishnah *Menahot* 8:4. The use of the olive press was prohibited to Jews in the Sabbatical year; Mishnah *Shebiit* 8:6.

97. Columella, *Rei Rusticae* XII, 52, 6–7; Pliny, *Natural History* XII, 60, 130; XV, 3, 9 to 4, 17. Aesop's fable of the lioness and the vixen is implicitly a caustic rebuke of this practice; see Aesop, *Fabula* 167.

98. Cato, *De Agri Cultura* LXVI, 1; cf. Mishnah *Maaserot* 4:1.
99. Cato, *De Agri Cultura* LXVI, 1; Pliny, *Natural History* XV, 6, 22; Jews prohibited placing olive oil into pans or pots; Mishnah *Maaserot* 1:7.
100. Columella, *Rei Rusticae* XII, 52, 13.
101. Varro, *Rerum Rusticarum* I, 61 and 64.
102. *Ibid.*, I, 55, 7; cf. Cato, *De Agri Cultura* 93. For pesticidal uses, see Pliny, *Natural History* XV, 8, 33.
103. Cato, *De Agri Cultura* 69; Pliny, *Natural History* XV, 8, 33-34.
104. Mishnah *Maaserot* 5:4.
105. Cato, *De Agri Cultura* 66–68, 145 (complete with contract, once again).
106. That is, by buying or renting all the olive presses and subletting them out as a monopoly. The story will be discussed later. Thales was notoriously intelligent and notoriously uninterested in money.
107. Mishnah *Kilayim* 6:5.
108. Chester G. Starr, *The Economic and Social Growth of Early Greece, 800–500 B.C.* (New York: Oxford University Press, 1977), 153–54; cf. Pliny, *Natural History* XII, 60, 130.
109. Cato, *De Agri Cultura* III, 2; cf. Varro, *Rerum Rusticarum* I, 22, 4. Cato was notoriously greedy. For Jewish conditions of storage, see Mishnah *Terumot* 8:10.
110. Varro, *Rerum Rusticarum* I, 13, 1 and 6–7; Columella, *Rei Rusticae* I, 6, 9 and 18.
111. Pliny, *Natural History* XV, 3, 7.
112. Cato, *De Agri Cultura* 58: *eas condito, parcito, uti quam diutissime durent*. Cato was notoriously stingy. Cf. Mishnah *Maaserot* 3:3.
113. Varro, *Rerum Rusticarum* I, 60; on Jewish pickling of olives, see Mishnah *Terumot* 2:6; 10:7.
114. Varro, *Rerum Rusticarum* I, 60.
115. *Ibid.*, I, 66; cf. Mishnah *Maaserot* 4:3.
116. Besides the other ways of preparing them mentioned below, Cato gives the following recipe: Remove the pits from any type of olive, chop up the olives and add oil, vinegar, coriander, cummin, fennel, rue and mint, place in an earthenware dish and sprinkle liberally with olive oil (Cato, *De Agri Cultura* 119). Other recipes may be found in Columella, *Rei Rusticae* XII, 49–51.
117. Cato, *De Agri Cultura* I, 117. The suggested ration was one half (Roman) pound of salt to the modius of olives. (You knew there was a reason you had the modius measure among the equipment.) The astute reader will note the similarity between this method of preparing olives and the method of preparing Kalamatia olives.

118. Varro, *Rerum Rusticarum* I, 46; cf. Matthew 24:32.

119. Theophrastus, *Historia Plantarum* I, 10, 1–2; Pliny, *Natural History* XVI, 36, 87–88.

120. Cato, *De Agri Cultura* XL, 1, 44; starting early on the pruning is emphasized, 32; on nourishing with *amurca* in early March, see Columella, *Rei Rusticae* XI, 2, 29; planting in late February and early March; *ibid.*, XI, 2, 42. On the planting, see also Columella, *De Arboribus* 17, 1.

121. This may have been what Vergil intended in *Georgics* II, 420–23; Pliny, *Natural History* XVI, 42, 104.

122. Cato, *De Agri Cultura* V, 8, 27.

123. Theophrastus, *Historia Plantarum* IV, 14, 8; Pliny, *Natural History* XV, 3, 9–10; XVII, 2, 11.

124. Theophrastus, *Historia Plantarum* IV, 14, 8–10.

125. Pliny, *Natural History* XV, 3, 9. Of course, because of precession (and latitude differences), this will not work elsewhere or in modern times.

126. Cato, *De Agri Cultura* 144.

127. Columella, *Rei Rusticae* XII, 52, 1–2.

128. Bill Hess first drew this fact to our attention. We have since found an ancient source that says something similar; see Pliny, *Natural History* XV, 4, 15.

129. I. J. Gelb, *Glossary of Old Akkadian*, Materials for the Assyrian Dictionary, No. 3 (Chicago: University of Chicago Press, 1973), 240.

130. Pyramid Text 72 (50), in Alexandre Piankoff, *The Pyramid of Unas* (Princeton, NJ: Princeton University Press, 1968), plates 58, 63. The passage is part of the Old Kingdom Opening of the Mouth ritual and had been changed by New Kingdom times; see Eberhard Otto, *Das ägyptische Mundöffnungsritual*, 2 vols., Band 3 of *Ägyptologische Abhandlungen* (Wiesbaden: Harrassowitz, 1960), 2:22–26; its place seems to be taken by *mdt*. The pyramid text is the first attestation of this oil; it is absent from Peter Kaplony, *Die Inschriften der ägyptischen Frühzeit*, 3 vols., Band 8 of *Ägyptologische Abhandlungen* (Wiesbaden: Harrassowitz, 1963), 1:301–17.

131. Germer, “Olive,” 567 (though using only late evidence). The equation of *dt*-oil with olive oil is not absolutely beyond question. Doubts about it arise if one insists, with Faulkner, that *dt* simply abbreviates the later *mdt*, “oil,” and if one derives *mdt* from *mdd*, “to press, to squeeze.” See Raymond O. Faulkner, *A Concise Dictionary of Middle Egyptian* (Oxford: Oxford University Press, 1962), 123–24, 318. This etymology does not seem to be compelling, however. The proposed phonetic shift *d* > *t* is, it is true, attested in Egyptian, but only

at a much later stage in the language's history than the one in question here. A connection between *dt* and West Semitic *zyt* thus seems a more likely explanation for the Egyptian word—although one could certainly argue that, since the earliest attestation of *zyt* is Ugaritic, and is thus itself somewhat late, the West Semitic word could just as easily have derived from the Egyptian *dt*, rather than vice versa.

132. Or perhaps to the long distance between Mesopotamia and the apparent native lands of the olive. The Pyramid Texts are generally dated to ca. 2500 B.C., during the Fifth Dynasty reign of Unas. Joseph H. Greenberg, "Were There Egyptian Koines?" in Joshua A. Fishman et al., eds. *The Fergusonian Impact: Vol. 1, From Phonology to Society* (Berlin: de Gruyter, 1986), 275, places them much earlier.

133. Linear B, the language of the earliest Greek records, dates to about 1450–1200 B.C., nearly 1000 years too late to claim priority. See Michael Ventris and John Chadwick, *Documents in Mycenaean Greek*, 2d ed. (Cambridge: Cambridge University Press, 1973), 28. Our position on the origin of the olive is independently corroborated by Germer, "Olive," 567.

134. Gelb, *Glossary of Old Akkadian*, 240.

135. See CAD, s.v. *sirdu*. Caution must be exercised here and elsewhere, because the use of the term "oil" or even "vegetable oil" in a text does not necessarily indicate the use of specifically *olive* oil. See CAD, s.v. *šamnu*; Herodotus II, 94, 2; Manniche, *Ancient Egyptian Herbal*, 18, 48, 51, 68, 125, 147; Güterbock, "Oil Plants in Hittite Anatolia," 66–71.

136. "I planted all kinds of mountain grape vines, all the fruit trees (known to grow) in human habitations, herbs and olive trees." So Sennacherib; CAD s.v. *sirdu* 1a, *karanu* 2a

137. CAD, s.v. *sirdu* 1a; Herodotus I, 193, 3–4. On the other hand, wine and olive oil are alleged to have been abundantly produced in Persia. See Michael Rostovtzeff, *The Social and Economic History of the Hellenistic World*, 3 vols. (Oxford: Clarendon, 1959), 1:83.

138. References to *ì-ḡiš* are legion and readily available from the appropriate lexica and glossaries.

139. Güterbock, "Oil Plants in Hittite Anatolia," 66–71.

140. CAD, s.v. *sirdu*; Cyrus H. Gordon, *Ugaritic Textbook* (Rome: Pontifical Biblical Institute, 1965), 233, 238–39; Charles Virolleaud, *Le Palais Royal d'Ugarit V*, vol. 11 of *Mission de Ras Shamra* (Paris: Imprimerie Nationale, 1965), 49, 73; Richard E. Whitaker, *A Concordance of the Ugaritic Literature* (Cambridge: Harvard University Press, 1972), 252–53.

141. See Manfred Bietak, "Tell ed-Daba," in *Lexikon der Ägyptologie*, 6:322.

142. See Ingrid Gamer-Wallert, "Baum," in *Lexikon der Ägyptologie*, 1:660; Ingrid Gamer-Wallert, "Cheribakef," in *Lexikon der Ägyptologie* 1:940; Pliny, *Natural History* XV, 7, 25.

143. Germer, "Olive," 567; Renate Germer, "Öle," in *Lexikon der Ägyptologie*, 4:553; Manniche, *Ancient Egyptian Herbal*, 16–17; Papyrus Anastasi III, col. 2, line 5; Papyrus Rainer 53, lines 9–10, both in Alan H. Gardiner, *Late-Egyptian Miscellanies* (Brussels: Fondation Égyptologique Reine Élisabeth, 1937), 22, 138; Vivi Täckholm, "Flora," in *Lexikon der Ägyptologie*, 2:270, merely mentions their existence. Hellmut Brunner, "Granatapfel," in *Lexikon der Ägyptologie*, 2:891, attributes the importation of the olive to Thuthmosis III, with the apple, but his citations do not support this.

144. Mishnah *Shebiit* 6:5 may have something to do with this.

145. Germer, "Öle," 553.

146. "Sie wuchs sicher nicht häufig in Ägypten"; Germer, "Öle," 553. For an olive-related prayer, see Papyrus Harris I, col. 8, line 5, in Wolja Erichsen's *Papyrus Harris I: Hieroglyphische Transkription* (Brussels: Fondation Égyptologique Reine Élisabeth, 1933), 10. See Manniche, *Ancient Egyptian Herbal*, 128–29. The connection between the olive and vine was still strong, as the vines "rankten sich von Olivenbaum zu Olivenbaum"; Christine Meyer, "Wein," in *Lexikon der Ägyptologie* 6:1173.

147. Rostovtzeff, *Social and Economic History of the Hellenistic World*, 1:274; the reference to Egypt as the gift of the Nile is a paraphrase of Herodotus II, 5.

148. The oasis known as the Fayyum was the one place in Egypt where olives appear to have flourished. On the wine in Egypt, see Meyer, "Wein," 1169–82; Leonard Lesko, *King Tut's Wine Cellar* (Berkeley: Scribe, 1977).

149. Rostovtzeff, *Social and Economic History of the Hellenistic World*, 1:287, 327.

150. Theophrastus, *Historia Plantarum* IV, 2, 8–9. Some have argued that it did grow well—see Pascal Vernus, "Wald," in *Lexikon der Ägyptologie*, 6:1144—but the arguments are not persuasive.

151. Rostovtzeff, *Social and Economic History of the Hellenistic World*, 1:226–27.

152. See Starr, *Economic and Social Growth of Early Greece*, 157.

153. Mishnah *Menahot* 8:3. Other stipulations in *Terumot* 11:10.

154. 1 Kings 6:23, 31–33. Hyrum of Tyre is providing the woodwork. See Stephen D. Ricks, "Olive Culture in the Second Temple Era

and Early Rabbinic Period," in this volume. Mishnah *Shebiit* 9:3 might argue against this.

155. His tribal affiliation, Manasseh, puts Lehi's ancestry in Israel, the northern Hebrew kingdom. Thus, he would have tended to have ties to the area of Phoenicia, or modern Lebanon. That he and his family in fact did have such ties appears likely from a close reading of the Book of Mormon text. It is interesting to note that the Book of Mormon refers often to New World places bearing the name "Sidon," but that the name "Tyre" is nowhere to be found. See Hugh W. Nibley, "The Troubled Orient," in *Lehi in the Desert/The World of the Jaredites/There Were Jaredites*, vol. 5 in *The Collected Works of Hugh W. Nibley* (Salt Lake City: Deseret Book and F.A.R.M.S., 1988), 23–24; and Hugh W. Nibley, "Dealings with Egypt," and "Politics in Jerusalem," in *An Approach to the Book of Mormon*, vol. 6 in *The Collected Works of Hugh Nibley*, 3d ed. (Salt Lake City: Deseret Book and F.A.R.M.S., 1988), 88–89, 102. Homer, likewise, knew a great deal about the Phoenicians. Sidon, he was aware, was their leading city; but he never mentions Tyre. (See *Iliad* VI, 288–292; *Odyssey* XIII, 272–86; XIV, 288–97.) And even though Tyre had actually supplanted Sidon as the leading Phoenician city by about 750 B.C., a Phoenician inscription on the island of Cyprus, dating from about 740 B.C., nonetheless refers to a king of Tyre as "king of the Sidonians"; see H. Donner and W. Röllig, *Kanaanäische und Aramäische Inschriften*, 3 vols. (Wiesbaden: Harrassowitz, 1979), texts 13–16, 31; *Oxford Classical Dictionary*, 827. A further tie between the Lehites and the Phoenicians may occur in the fact that the name of the evil "Jezebel daughter of Ethbaal, king of the Sidonians" (1 Kings 16:31, NJB) shows up in "the land of Siron, among the borders of the Lamanites," affixed to a famous harlot (Alma 39:3). "Siron" itself may be the name "Sidon," following a *d>r* soundshift that is, linguistically, not at all unlikely.

156. See Ventris and Chadwick, *Documents in Mycenaean Greek*, 218–21. The common diet was wheat, oil, olives, and figs; *ibid.*, 31.

157. Pindar, *Olympian Odes* III, 6–34.

158. Theophrastus, *Historia Plantarum* IV, 3, 2.

159. See Richard Duncan-Jones, *Structure and Scale in the Roman Economy* (Cambridge: Cambridge University Press, 1990), 33.

160. Walter Burkert, *Greek Religion*, trans. John Raffan (Cambridge: Harvard University Press, 1985), 85; Martin P. Nilsson, *A History of Greek Religion*, trans. F. J. Fielden, 2d ed. (New York: Norton, 1964), 27. Sacred trees are also, of course, very well known in the Near East and are often associated with temple sanctuaries. One naturally thinks here of the *ished*-tree of Egyptian Heliopolis, but it is probably

not amiss to think also of Eden's "Tree of Life" and of the multi-branched menorah of the temple at Jerusalem. This is not surprising, since, as Mircea Eliade has written, "The most widespread mythical images of the 'Center of the World' . . . are the Cosmic Mountain and the World Tree." Thus, the temple and the tree are often linked. See Mircea Eliade, *A History of Religious Ideas*, 3 vols., translated by Willard R. Trask (Chicago and London: University of Chicago Press, 1978–1985), 3:7.

161. Burkert, *Greek Religion*, 141. This story may suggest that the olive was not native to Greece, or at least to Attica. Herodotus, *Historiae* V, 82, 2 speculates that, in 625 B.C., the olive only grew in Athens. Joseph Fontenrose, *The Delphic Oracle: Its Responses and Operations with a Catalogue of Responses* (Berkeley: University of California Press, 1978), 288–89, of course, denies any historicity to this account. Theophrastus knows the myth of the tame olive at Athens; Theophrastus, *Historia Plantarum* IV, 13, 2.

162. Herodotus, *Historiae* IV, 34, 2; V, 82, 2; VIII, 55; Burkert, *Greek Religion*, 141. In later times, the olive was sacred to Hermes. See *Papyri Graecae Magicae* VIII, 12, in Karl Preisendanz, *Papyri Graecae Magicae* (Leipzig: Teubner, 1928–41), 46.

163. Burkert, *Greek Religion*, 141.

164. Varro, *Rerum Rusticarum* I, 13, 1; Pliny, *Natural History* VIII, 76, 204.

165. Herodotus, *Historiae* VIII, 26, 2; VIII, 124, 2; cf. Pliny, *Natural History* XV, 5, 19. Epimenides beat the Athenians at the game too; see Plutarch, *Solon* XII, 6. For the olive as a symbol of victory, compare also Judith 15:13, in the apocryphal Old Testament, where the victorious heroine and her associates place wreaths of olive leaves on their heads after the death of the oppressor Holofernes. Likewise, olive wreaths were placed on Tutankhamen's coffin. (Manniche, *Ancient Egyptian Herbal*, 27.) Cf. Dieter Jankuhn, "Kranz der Rechtfertigung," in *Lexikon der Ägyptologie*, 3:764. Aeschylus, *Persians* 616–18, places it in Persian funerary practices, though these practices are probably in reality Greek.

166. Lysias's oration, "Before the Areopagus: Defense in the Matter of the Olive-Stump," provides an interesting view of a case from the early fourth century B.C. involving precisely this offense.

167. Ventris and Chadwick, *Documents in Mycenaean Greek*, 129. Most of the tablets "seem to belong to the lists of offerings"; *ibid.*, 218.

168. R. J. Hopper, *Trade and Industry in Classical Greece* (London: Thames and Hudson, 1979), 62; Rostovtzeff, *Social and Economic History of the Hellenistic World*, 1:229, 247.

169. Rostovtzeff, *Social and Economic History of the Hellenistic World*, 1:210.

170. Starr, *Economic and Social Growth of Early Greece*, 154, 156; Hopper, *Trade and Industry in Classical Greece*, 62. The association of olive and vine culture may help to explain the use of the term "vineyard" in Jacob 5. For an example of literal closeness of vine and olive tree in ancient agriculture, see Lysias, "Before the Areopagus: Defence in the Matter of the Olive Stump," 14.

171. Rostovtzeff, *Social and Economic History of the Hellenistic World*, 1:90.

172. *Ibid.*, 1:93–94, 107. The only exception to the general pattern mentioned by Rostovtzeff (on p. 111)—a rather slight one—is Thrace, which continued to depend upon the Greek heartland for its olives and olive oil, but became essentially self-reliant in wine production. Olives grew well in the Aegean Islands, especially Melos; Theophrastus, *Historia Plantarum* VIII, 2, 8.

173. Michael Rostovtzeff, *Social and Economic History of the Hellenistic World*, 1:123. Pliny, *Natural History* XV, 1, 1, asserts that no olives existed in Italy during the reign of Tarquinius Priscus in the sixth century before Christ, but this is a statement of uncertain value. See Hopper, *Trade and Industry in Classical Greece*, 62.

174. Bonfante and Bonfante, *Etruscan Language*, 110.

175. Rostovtzeff, *Social and Economic History of the Roman Empire*, 1:10. See also Hopper, *Trade and Industry in Classical Greece*, 62; Rostovtzeff, *Social and Economic History of the Hellenistic World*, 1:123.

176. Hopper, *Trade and Industry in Classical Greece*, 62.

177. Rostovtzeff, *Social and Economic History of the Roman Empire*, 1:1–2. For the close connection between business and war, see F. N. Maude, in Carl von Clausewitz, *On War* (Harmondsworth: Penguin, 1968), 87.

178. Rostovtzeff, *Social and Economic History of the Roman Empire*, 1:21, 314. Cato, Plutarch lamented, was an avaricious miser. See Plutarch, *Marcus Cato*, IV, 3–5, 6; IX, 6; XXI, 5–8. He was also xenophobic. See XXII, 2 to XXIII, 4.

179. Rostovtzeff, *Social and Economic History of the Roman Empire*, 1:9, 93.

180. *Ibid.*, 22. Though Carthage was utterly destroyed in the Third Punic War, and may have been plowed, it was not sowed with salt (contrary to many, if not all, of the history books of this century); see R. T. Riley, "To Be Taken with a Pinch of Salt: The Destruction of Carthage," *Classical Philology* 81 (1986): 140–46; Susan T. Stevens, "A Legend of the Destruction of Carthage," *Classical Philology* 83 (1988):

39–41; Pasto Visonà, "Passing the Salt: On the Destruction of Carthage Again," *Classical Philology* 83 (1988): 41–42; B. H. Warmington, "The Destruction of Carthage: A *Retractatio*," *Classical Philology* 83 (1988): 308–10.

181. Theophrastus, *Historia Plantarum* IV, 3, 1. Pliny (*Natural History* XV, 3, 8) denies that Africa can produce even mediocre olives. Nevertheless, not all olives are created equal; Mishnah *Shebiit* 4:10.

182. See Plautus, *Pseudolus* 209–24. For prices later, see Pliny, *Natural History* XV, 1, 2–3.

183. Rostovtzeff, *Social and Economic History of the Roman Empire*, 1:21.

184. Caesar, *Gallic War* IV, 2–3.

185. Rostovtzeff, *Social and Economic History of the Roman Empire*, 1:30.

186. *Ibid.*, 1:67–69.

187. *Ibid.*, 1:235–37.

188. Pliny, *Natural History* XV, 3, 8.

189. Rostovtzeff, *Social and Economic History of the Roman Empire*, 1:239–42. Initially, the Romans had been interested in Dalmatia principally for the rich iron mines there.

190. *Ibid.*, 1:335. On the *sparsio*, see Nibley, "Sparsiones," in *The Ancient State*, vol. 10 in *The Collected Works of Hugh Nibley* (Salt Lake City: Deseret Book and F.A.R.M.S., 1991), 148–94.

191. These olive groves continued to flourish until the fifth century A.D. See Rostovtzeff, *Social and Economic History of the Roman Empire*, 1:344, 692. The reason for the groves' disappearance is unclear, but the arrival on the scene of the Vandals, in A.D. 439, may not be unrelated, though the Vandals picked up olive culture rather quickly (Matho's [Mago's] work was still extant); see Barbara Pischel, *Kulturgeschichte und Volkskunst der Wandeln* (Frankfurt am Main: Lang, 1980), 80–81.

192. Rostovtzeff, *Social and Economic History of the Roman Empire*, 1:93.

193. *Ibid.*, 1:201.

194. Alan K. Bowman, *Egypt after the Pharaohs 332 B.C.–A.D. 642* (Berkeley: University of California Press, 1989), 37–39; Rostovtzeff, *Social and Economic History of the Roman Empire*, 1:201.

195. Rostovtzeff, *Social and Economic History of the Roman Empire*, 1:201.

196. *Ibid.*, 1:201.

197. *Ibid.*, 1:202–3, 368–69.

198. *Ibid.*, 1:213; cf. Mishnah *Shebiit* 4:10.

199. Rostovtzeff, *Social and Economic History of the Roman Empire*, 1:271; Yigael Yadin, *Bar-Kokhba: The Rediscovery of the Legendary Hero of the Second Jewish Revolt Against Rome* (New York: Random House, 1971), 17–26; Dio Cassius, *Roman History* LXIX, 12–14.

200. Pliny, *Natural History* XIII, 50, 139.

201. Rostovtzeff, *Social and Economic History of the Roman Empire*, 1:281, 2:674–76 n. 49; Bowman, *Egypt after the Pharaohs*, 157.

202. Rostovtzeff, *Social and Economic History of the Roman Empire*, 1:281–83; Farouk Gomaà, “Magdola,” in *Lexikon der Ägyptologie*, 3:1134.

203. Rostovtzeff, *Social and Economic History of the Roman Empire*, 1:294.

204. *Ibid.*, 1:294–96.

205. *Ibid.*, 1:480–81. “In the long run,” said Lord Keynes, guru of government policymakers, “we are all dead.”

206. Laufer, *Sino-Iranica*, 415–19.

207. Plutarch, *Solon* XVIII, 1–2; Starr, *Economic and Social Growth of Early Greece*, 49, 154.

208. Plutarch, *Solon* XXIII, 6.

209. Bowman, *Egypt after the Pharaohs*, 56, 94.

210. See Papyrus Hibeh 59, in Grenfell and Hunt, *The Hibeh Papyri*, 1:205.

211. Papyrus Hibeh 112–13, 121, in *ibid.*, 1:296–305, 320–23.

212. Duncan-Jones, *Structure and Scale in the Roman Economy*, 66; Hopper, *Trade and Industry in Classical Greece*, 95. Hopper suspects the existence of parallel regulations going back into pre-Roman times in Greece, possibly to as early a period as the fifth to fourth centuries B.C.

213. A. E. R. Boak, “Early Byzantine Papyri from the Cairo Museum,” *Études de Papyrologie* 2 (1933): 8–11; the quotation is from Joseph A. Tainter, *The Collapse of Complex Societies* (Cambridge: Cambridge University Press, 1988), 141.

214. Papyrus Antinoopolis 190, in J. W. B. Barns and H. Zilliagus, *The Antinoopolis Papyri*, 3 vols. (London: Egypt Exploration Society, 1960–67), 3:161–65.

215. See the map at Tim Cornell and John Matthews, *The Cultural Atlas of the World: The Roman World* (Alexandria, VA: Stonehenge Press, 1991), 110–11, where this point is explicitly made.

216. This is interesting, particularly because the olive did not flourish in Mesopotamia—yet another indication that “Babylon” here has to mean Rome.

217. Herodotus I, 170, 3.

218. The story is told in Aristotle, *Politics*, I, 11 (1259^a 6–18); Diogenes Laertius, *Lives of Eminent Philosophers*, I, 26. Plutarch, *Solon* II, 4; III, 5, seems also to refer to Thales's career as an oil merchant.

219. Plutarch, *Solon* II, 4.

220. Finley, *The Ancient Economy*, 132–33, 139. In Europe, on the other hand, where for instance the climatically handicapped north was dependent on the south for its supply, trade in olive oil formed a relatively important aspect of international economics. See Fernand Braudel, *Civilization and Capitalism, 15th-18th Century*, vol. 3, *The Perspective of the World* (New York: Harper and Row, 1984), 36–38. That the olive was commonplace may be seen in the works of Pliny, most of whose references to olives are simply in comparing other, more exotic plants to the olive for purposes of illustration.

221. Plutarch, *Solon* XXIV, 1. Plutarch explains that, under Solon's legislation, informers against illegal fig-exporters were called "sycophants" (from the Greek *sykon*, "fig"). See also Starr, *Economic and Social Growth of Early Greece*, 175; Hopper, *Trade and Industry in Classical Greece*, 62.

222. Josephus, *Contra Apionem* 74–76. (Thanks to Lyston Barker for drawing this reference to our attention.) Mishnah *Shebiit* 6:5–6 was likely a precedent invoked.

223. See Mishnah *Peah* 7:1–2; 8:3; Mishnah *Shebiit* 6:5.

224. Papyrus Hibeh 49, in Grenfell and Hunt, *The Hibeh Papyri*, 1:192–193; c.f. Wolfgang Helck, "Maße und Gewichte," in *Lexikon der Ägyptologie*, 3:1203–5.

225. Starr, *Economic and Social Growth of Early Greece*, 153; Hopper, *Trade and Industry in Classical Greece*, 97; Rostovtzeff, *Social and Economic History of the Hellenistic World*, 1:88.

226. Suzanne Richard, "Olive," in Paul J. Achtemeier, ed., *Harper's Bible Dictionary* (San Francisco: Harper and Row, 1985), 727.

227. In Mesopotamia, sesame oil seems to have served the purpose generally reserved to olive oil in Palestine. See Ross, "Oil," 3:592. Still, in Revelation 18:12–13, cited above, the Greek word translated by the KJV as "oil" is, specifically, *elaion* ("olive oil").

228. Compare the situation depicted in 2 Kings 4:2.

229. Richard, "Olive," 728.

230. Finley, *The Ancient Economy*, 31. The utility of the olive as a source of edible fat is illustrated by the fact that olive oil continued to be used even in much of early modern Europe (i.e., between the fifteenth and eighteenth centuries) as a substitute for butter. See Fernand Braudel, *Civilization and Capitalism, 15th-18th Century*, vol. 1,

The Structures of Everyday Life: The Limits of the Possible (New York: Harper and Row, 1981), 212.

231. Richard, "Olive," 728.

232. Finley, *The Ancient Economy*, 31.

233. Edward W. Lane, *An Arabic-English Lexicon*, 2 vols. (Cambridge: The Islamic Texts Society, [1863] 1984), 1:1274. It is "eternal" (Aeschylus, *Persians* 616–18) and not even the withering hand of age destroys it (Sophocles, *Oedipus at Colonus* 694–705). Similarly exaggerated notions may undergird Shakespeare's optimistic but obscure assertion, in Sonnet 107, that "peace proclaims olives of endless age." Theophrastus is more reasonable: He estimates "about two-hundred years"; Theophrastus, *Historia Plantarum* IV, 13, 5.

234. Thus [Al-Qurtubī] Abū 'Abd Allāh Muḥammad b. Aḥmad al-Anṣārī al-Qurtubī, *Al-Jāmi' li-Aḥkām al-Qur'ān*, 8 vols. (Cairo: Dār al-Sha'b, n.d.), 6:4650.

235. See also R. Dozy, *Supplément aux Dictionnaires Arabes*, 2 vols. (Beirut: Librairie du Liban, 1968 [1881]), under "zyt," which offers some additional definitions.

236. Since, of course, our own word *oil* is itself related to the word *olive*, this is not altogether unexpected. See Eric Partridge, *Origins: A Short Etymological Dictionary of Modern English* (New York: Greenwich House, 1983), 450.

237. James Frazer, *The New Golden Bough*, abridged by Theodor E. Gaster (New York: Mentor, New American Library, 1964), 114.

238. See, on this, Herodotus, *Historiae* VIII, 55; Philochoros, Fragment 67 cited in Dionysius of Halicarnassus, *De Dinarch* 3, in Felix Jacoby, *Die Fragmente der griechischen Historiker* (Leiden: Brill, 1964), III.B.1:118 (= FGrHist 328 F 67); Euripides, *Ion* 1433–36; M. Detienne, "L'olivier, un mythe politico-religieux," *Revue de l'histoire des religions* 178 (1970): 5–23.

239. 2 *Enoch* 8:5. The same verse in the longer recension seems to hint at something similar.

240. Qur'an 6:99; cf. 6:141; 16:11; 80:24–32. All translations from the Qur'an are our own.

241. Qur'an 95:1–3.

242. Mishnah *Terumot* 1:9. For Egyptian consumption of olives, see Germer, "Olive," 567; Wolfgang Helck, "Ernährung," in *Lexikon der Ägyptologie*, 1:1269; Manniche, *Ancient Egyptian Herbal*, 129.

243. Judith 10:5.

244. Yadin, *Bar-Kokhba*, 211.

245. Mishnah *Shebiit* 2:5.

246. Starr, *Economic and Social Growth of Early Greece*, 153; cf. Sophocles, *Oedipus at Colonus* 701: *glaukos paidotrophou phyllon elaias*.

247. 2 Samuel 14:2 allows the omission of such anointing at times of mourning; see also Mishnah *Maaser Sheni* 2:1–2.

248. Compare Herodotus III, 23, 2, where olive oil is used to make the skin “glisten.”

249. Ezekiel 16:8–10 furnishes a striking example of this when, in an extended metaphor, God finds “Jerusalem” abandoned and suffering, but covenants with her, washes her with water, anoints her with oil, and dresses her in new clothes. *Second Enoch* 22:8–10 provides an example of this, including also the idea of deification, occurring in the tenth heaven.

250. Mishnah *Shebiit* 8:2.

251. Examples include Telemachus, at the house of Nestor (*Odyssey* III, 464–69), and Telemachus and Peisistratus, visiting the palace of Menelaus and Helen (*Odyssey* IV, 47–51).

252. Manniche, *Ancient Egyptian Herbal*, 48, 50, 129. On page 20, Manniche reports the use of such oil in the process of embalming. The passage cited above from 2 Enoch 22:8–10 also speaks of perfumed oil; see also Pliny, *Natural History* XIII, 1, 3. Perfumed oil could not be eaten by Jews; Mishnah *Terumot* 11:1; cf. *Maaser Sheni* 2:1.

253. Pliny, *Natural History* XV, 5, 19.

254. Mishnah *Terumot* 1:4.

255. See also Burkert, *Greek Religion*, 72.

256. Of course, if these were leather shields, they may have been “anointed” simply to keep them from cracking in the dry Palestinian climate. Jewish law forbids such anointings during a Sabbatical year; see Mishnah *Shebiit* 8:8–9.

257. Mishnah *Demai* 1:3–4.

258. Compare, too, the statements of St. Cyril of Jerusalem (ca. A.D. 313–86) and the roughly contemporary Valentinian compilation called “The Gospel According to Philip,” both of which say that it is by reason of our own “anointing” or “chrism” that we have the right to be called Christians ourselves. (On anointing, see 1 John 2:20, 27.) “Having been counted worthy of this Holy Chrism,” St. Cyril declares (*Catechetical Lecture* 21:5; English translation in Philip Schaff and Henry Wace, *The Nicene and Post-Nicene Fathers*, 7:150), “Ye are called Christians. . . . For before you were deemed worthy of this grace, ye had properly no right to this title.” “Chrism has more authority than baptism,” says “The Gospel According to Philip” 74:12–14; English translation in Bentley Layton, *The Gnostic Scriptures* (Garden City: Doubleday, 1987), 346. “For because of chrism we are

called Christians." It is interesting to reflect that, if these two early Christian sources are correct, the Latter-day Saints, who know an ordinance of "anointing," may qualify as Christians while most of those who deny that Mormons are Christians cannot, since they have no such ordinance.

259. Herodotus, *Historiae* II, 62, 1; Germer, "Olive," 567; Helck, "Ernährung," 1269; Täckholm, "Flora," 273; Henry G. Fischer, "Lampe," in *Lexikon der Ägyptologie* 3:915, 917; Manniche, *Ancient Egyptian Herbal*, 129; Pierre Montet, *Everyday Life in Egypt in the Days of Ramesses the Great* (Philadelphia: University of Pennsylvania Press, 1981), 90.

260. Pliny, *Natural History* XV, 4, 18.

261. Mishnah *Demai* 1:3; *Menahot* 8:4–5.

262. Qur'an 24:35–37.

263. Al-Qurtubī, *Al-Jāmi' li-Ahkām al-Qur'ān*, 6:4650; [Al-Zamakhsharī] Abū al-Qāsim Jār Allāh Mahmūd b. 'Umar al-Zamakhsharī al-Khawarizmī, *Al-Kashshāf 'an Haqā'iq al-Tanzīl wa 'Uyūn al-Aqāwīl fī Wujūh al-Ta'wīl*. 4 vols. (Beirut: Dār al-Ma'rifa li al-Tibā'a wa al-Nashr, n.d.), 3:67.

264. Al-Zamakhsharī, *al-Kashshāf*, 3:67.

265. *Ibid.*, 3:67–68; cf. [Al-Tabarī] Abū Ja'far Muḥammad b. Jarīr al-Tabarī, *Jāmi' al-Bayān fī Tafsīr al-Qur'ān*, 30 vols. (Dār al-Ma'rifa li al-Tibā'a wa al-Nashr, 1978), 18:110. Other classical commentators emphasize the high quality, the "purity" or the "clarity" [*safw*], of the oil referred to in the "Light Verse." See, for instance, the medieval work of [Ibn Kathīr] 'Imād al-Dīn Abū al-Fidā' Ismā'īl b. Kathīr al-Qurashī al-Dimashqī, *Tafsīr al-Qur'ān al-'Azīm*, 4 vols. (Aleppo: Maktabat al-Irshād al-Islāmī, 1980), 3:290–291; al-Tabarī, *Jāmi' al-Bayān fī Tafsīr al-Qur'ān*, 18:110–11. Some commentators insist, on the other hand, that the tree alluded to is not of this world. See citations at al-Tabarī, *Jāmi' al-Bayān fī Tafsīr al-Qur'ān*, 18:110.

266. Al-Qurtubī, *Al-Jāmi' li-Ahkām al-Qur'ān*, 6:4650.

267. It may have been similarly used in ancient Egypt, but the evidence is somewhat ambiguous. See Manniche, *Ancient Egyptian Herbal*, 78, 125, 129.

268. *Babylonian Talmud*, *Shabbat* 134a.

269. Mishnah *Demai* 1:4.

270. Frazer, *The New Golden Bough*, 116. See Manniche, *Ancient Egyptian Herbal*, 78, for the presence of olive oil in a pharaonic Egyptian medical compound used to treat disorders of the womb.

271. Pliny, *Natural History* XV, 5, 19: *eiden fervores capitis refrigerare*.

272. Al-Zamakhsharī, *al-Kashshāf*, 3:67.

273. See Eliade, *A History of Religious Ideas*, 2:401–3.

274. Friedrich Blass, “Hermeneutik und Kritik,” in *Einleitende und Hilfsdisziplinen*, vol. I of *Handbuch der klassischen Altertums-Wissenschaft* (Nördlingen: Beck, 1886), 271–72.

275. Zenos can be dated from two criteria. First, the mention of “those who are at Jerusalem” (1 Nephi 19:13) means that Zenos had to have lived after David took the city. (The text of 1 Nephi 19:11–17 forms a single flowing context and can all be attributed to Zenos, as can also the nameless “prophet” of 1 Nephi 22:17–18, 23–25; it would seem that many of the sayings attributed simply to “the prophet” refer to Zenos and not Isaiah). Second, because Zenos is a northern prophet, he would have prophesied before the captivity of the northern kingdom, which would indicate why his record is not in the Bible, as only the works of southern prophets are included therein.

276. We omit Pliny, since he supplies few details significant for our purpose.

277. Columella, *Rei Rusticae* I, 5, 7.

278. Cato, *De Agri Cultura* 10; Varro, *Rerum Rusticarum* I, 18.

279. Theophrastus, *Historia Plantarum* II, 3, 1.

280. Romans 11:16–24 does mention wild and tame and grafting, but nothing about the fruit or the purposes thereof. A casual reading of Paul leaves the impression that it is as easy to be one way as the other.

281. See Paul, “Joseph Smith and the Manchester (New York) Library,” 333–56.

282. We know that Joseph Smith studied Greek in December 1835, yet even then it was not as high a priority as Hebrew—to our knowledge the first mention of studying the language is 23 December 1835, and he could not have gotten very far before he got his dictionary on 20 November 1835—see Dean C. Jessee, ed. and comp., *The Personal Writings of Joseph Smith* (Salt Lake City: Deseret Book, 1984), 91, 117; Dean C. Jessee, ed., *The Papers of Joseph Smith*, 2 vols. (Salt Lake City: Deseret Book, 1989–92), 1:144, 177; 2:87, 120. To our knowledge, Joseph Smith’s first citation of either Greek or Latin occurs on 6 September 1842, at D&C 128:8, 11; for later references, see also Joseph Fielding Smith, comp., *Teachings of the Prophet Joseph Smith* (Salt Lake City: Deseret Book, 1972), 300; DHC 6:75, 90. In fact, his mother, Lucy Mack Smith, said of Joseph at this time that he was “a boy, eighteen years of age, who had never read the Bible through in his life: He seemed much less inclined to the perusal of books than any of the rest of our children, but far more given to meditation and deep study.” Lucy Smith, *Biographical Sketches of Joseph Smith the Prophet*

and his Progenitors (Lamoni, IO: Reorganized Church of Jesus Christ of Latter Day Saints, 1912), 2. Lucy Mack Smith, *History of Joseph Smith* [Salt Lake City: Bookcraft, 1979], 82).

283. Theophrastus, *Enquiry into Plants*, trans. Arthur Hort (London: Heinemann, 1916).

284. Robert E. Dengler, *Theophrastus: De Causis Plantarum Book One: Text, Critical Apparatus, Translation and Commentary*, Ph.D. dissertation, University of Pennsylvania, 1927. The first full translation is Benedict Einarson and George K. K. Link: *Theophrastus, De Causis Plantarum*, 3 vols. (London: Heinemann, 1976–90).

285. Thomas Owen, *M. Porcius Cato concerning Agriculture* (London: White, 1803); Thomas Owen, *Varro, Three Books concerning Agriculture* (Oxford: Oxford University Press, 1800); M. C. L. Curtius, *Iunius Moderatus Columella of Husbandry, in Twelve Books and His Book Concerning Trees* (London: Millar, 1745).

286. The narrative of Zenos follows the Hebrew narrative pattern as laid down by Robert Alter, *The Art of Biblical Narrative* (New York: Basic Books, 1981).

287. Zenos's plot is much more complicated than Paul's, and if Joseph Smith is adding to the plot, it must be explained how he got the extra details (e.g., discussions with the servants, the multiple branches and trees, the plots of land) and made them fit in with ancient olive lore.