

INTRODUCTION.

THERE is not in the whole of the Arts and Sciences, one link of their Circle so suitable for the occupation of man in a state of innocency, as that which embraces the cultivation of Plants; and it is an instance of the beneficent providence of the Deity, that He assigned a Garden as the dwelling of our first-created Parents. It is no consequence of the fall of Adam, that Plants require cultivation, he was placed in Paradise to till and to keep it. Then, the weed had not sprung up to render the tillage toilsome, Fruit Trees which God had " planted" were the chief objects of care, and it was an employment without labour; combining the preservation of health with amusement; pure without insipidity; constant without From that period Gardens have never ceased to engage the attention of man, and even now that their labours are manifold, they still afford "the purest of Human pleasures."

Whether as a private individual man regulates his Garden; —or with more extended benefit cultivates his Farm, still he participates in pleasure combined with utility; whilst his time is agreeably employed, he is benefitting mankind; "Nihil melius, nihil uberius, nihil libero homine dignius." When Alexander of Macedon enquired of Abdalonimus, a Sidonian Prince, who had been reduced to support himself

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from the produce of a Garden cultivated with his own hands, how he had endured his poverty, Abdalonimus answered, "May Heaven assist me in bearing my prosperity as well! I then had no cares, and my own hands supplied all my wants."*

For many ages after the Creation, the Arts and Sciences were chiefly confined to the Eastern Nations. In tracing the progress of the Agricolan Arts, in those early periods we must gather into one general outline the scanty information afforded by our oldest records of those times and countries.

Of the disposition of the Garden of Eden, we know nothing; to Poetic fiction it has been a fertile subject, but the Historian has no facts to relate. Horticulture being the almost sole occupation of our first Parents and their immediate descendants, and their attention being directed to those few Trees which afforded them sustenance, and perhaps the still fewer herbs that served them as medicaments, it is reasonable to conclude that in the course even of an ordinary life, one person might obtain considerable skill in their cultivation, but the practice of an existence protracted to a period embracing eight or nine centuries, and the experience of it participated in by descendants long arrived at maturity before its extinction, must of necessity have carried forward the improvement of the Art, as much nearly as now would occur in an equal number of generations. Experience soon would teach mankind those vegetables which were salutary, and the same unerring guide would speedily disclose the situations and circumstances in which those were in the greatest perfection. The Vine would be observed most vigorous in those warm climates, by the side of the stream, and thence Man would learn to carry Water to those at a distance from its banks. He would see those of its clusters first ripening which were open to the sun, and he would learn to expose them to its influence.

* Just. ii. c. 10. Q. Curtius 4. c. 1. Diodorus 17.



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He would observe the rankness of vegetation where animal exuviæ were deposited, and thence would be taught the use of Manures. Thus as necessity prompted an attention to Plants, so experience would give birth to their culture. These suppositions are supported as probable by the knowledge we possess of the various nations of the World, and their various grades of improvement; they are supported by every day's experience, for this demonstrates that every Art is comprised of the results of experiments, and that is the most perfect, in illustration of which the most have been obtained. Immediately after the flood Noah planted a Vineyard, and became intoxicated with the produce of its fruit. This slender information substantiates the supposition of their rapid improvement in the Arts, for Wine though discovered by chance, would require lengthened attention and practice to manufacture, yet Noah was only the tenth descendant from Adam.

That their attention was chiefly confined to fruits is evident. In Jacob's time the Vine, the Fig and the Almond, are frequently but exclusively, mentioned as products of the Gar-As might be anticipated, considering the warmth of their climate, a Cistern or Well of Water, a Fig Tree, and a Vine appear to have accompanied every habitation. Nuts and Almonds were also reckoned among the most choice productions of the country; they are specified as "being of the best fruits of the land," in the present which Israel sent to the governor of Egypt.* By this time Man had become habituated to a stationary life; property in land became appreciable; their cultivated lands were enclosed and Trees were grown in their hedge-rows. † The laws issued on Mount Sinai extended to the protection of their Vineyards. Olives, Leeks, Onions, Garlic, Cucumbers and Melons, were among the inhabitants of their Gardens. Their Vineyards were so extensive that Solomon had one which let for one thousand pieces of silver per annum.

^{*} Genesis xliii. 11. † Ibid. xxiii. 9. ‡ Numb. xi. 5. || Canticles viii. 12.



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Of the style of laying out their most splendid Gardens, we have but two authentic accounts, which describe that of Solomon, and those of Babylon.

Solomon flourished about 1014 years B. C. In his time luxury and refinement had extended to their Horticultural establishments. Sculptured ornaments were introduced among the flowers; fountains adorned as well as refreshed the Garden; Fruit bearing and aromatic plants; the Camphor, Cinnamon, Frankincense and chief Spice Trees; the Pomegranate, Cedar, Pine, Sweet Flag, Aloe, Lily, Vine, Nut Tree, Saffron, Fig, Apple, &c. were among its products. The Area appears to have been square and surrounded by a wall; Aviaries and other buildings adorned it.* In another place Solomon tells us he made Gardens, Orchards and Vineyards; planted them with Trees of every kind, and introduced water for their nourishment.†

"The Hanging Garden of Babylon was not built by Semiramis, who founded the city, but by a later prince, called Cyrus, for the sake of a Courtezan, who being a Persian, as they say, by birth, and coveting meadows on mountain tops, desired the king, by an artificial plantation, to imitate the land in Persia. This Garden was four hundred feet square, and the ascent up to it was as to the top of a mountain, and had buildings and apartments out of one into another, like a theatre. Under the steps to the ascent, were built arches one above another, rising gently by degrees, which supported the whole plantation. The highest arch upon which the platform of the garden was laid, was fifty cubits high, and the garden itself was surrounded with battlements and bulwarks. The walls were made very strong, built at no small charge and expence, being twenty-two feet thick, and every sally port ten feet wide. Over the several stories of this fabric were laid beams, and

^{*} Solomon's Song passim. † Eccles. ii. 4.



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summers of large massy stones, each sixteen feet long and The roof over all these was first covered with reeds, daubed with abundance of brimstone, (or bitumen,) then upon them, was laid double tiles, joined with a hard and durable mortar, and over them all, was a covering, with sheets of lead, that the wet which drained through the earth might not rot the foundation. Upon all these, was laid earth of a convenient depth, sufficient for the growth of the greatest trees. When the soil was laid even and smooth it was planted with all sorts of trees, which both for beauty and size might delight the spectators. The arches, which stood one above another, had in them many stately rooms of all kinds, and for all purposes. There was one that had in it certain engines, whereby it drew plenty of water out of the river Euphrates, through certain conduits hid from the spectators, which supplied it to the platform of the Garden.*

It is not improbable, says Major Rennel, that the trees were of a species different from those which are natives of the soil about Babylon. Curtius says, that some of them were eight cubits in girth, and Strabo states that there was a contrivance to prevent the large roots destroying the superstructure, by building vast hollow piers, which were filled with earth to receive them.

In ascertaining the state of the Horticultural practice of these early Nations we have little to guide us. Of Fruit Trees they appear to have taken the most care, and of these the Vine was preferred. They considered that it flourished best upon a hill.† Stones were removed from the soil.‡ The margin of some water was preferred. They appear to have raised varieties from seed, "I had planted thee a noble Vine, wholly a right seed, how then art thou turned into the degenerate plant of a strange Vine unto me?" A reproach to the

* Diodorus Siculus, b. ii. c. l. Curtius.—Strabo, &c. + Ps. lxxx. 10.

Isa. v. J. ‡ Ibid. | Jerem. ii. 21.



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Jews which would have been unintelligible to them, if they were not aware of the practice of raising the Vine from seed. That they were aware of the effects of one flower being impregnated by the pollen of another appears in the following verse. "Thou shalt not sow thy Vineyard with divers seeds, lest the fruit of thy seed which thou hast sown, and the fruit of thy Vineyard be defiled."* We may likewise conclude that they were aware, that Plants grow chiefly during the night, from the distinction which Moses made between the "fruits brought forth by the Sun," and those "put forth (or, as it may be translated, thrust forth) by the Moon."†

This early period was not without its literature relative to plants. Solomon wrote of them, "from the lofty Cedars of Lebanon, down to the humble Hyssop of the Wall." 1 It is to a still earlier period that many historians refer Zoroaster, even identifying him with Ham, Chuz, or Mizraim of the Holy writings; others place him at a much later period; a third set consider that there were several of the same name. One of these two last opinions is probably correct, since Pliny relates that Zoroaster left a Treatise upon Gardening; a work scarcely credible as existing in so early an age of the World.

About a Century posterior to Solomon flourished Homer. If we are to judge of the state of Gardening among the Greeks at that period, from his writings, we may decide that their Gardens were not very extensive. As with the brilliant fancy of a Poet he has given to the Garden of Alcinous an eternal Summer, and to his Palace Silver Pillars, we may reasonably conclude with Walpole, that the size of the Garden was proportionably exaggerated. This he states as being four Acres, an enclosure therefore though comprehending the Orchard and Kitchen Garden which the Grecians probably never witnessed. The Apple, Fig, Pomegranate, Pear, Olives

* Deut. xxii. 9. † Deut. xxxiii. 14. ‡ 1 Kings iv. 22.

¶ Plln. b. vii. c. 10. b. xxx. c. 1.



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and various herbs were its products. The Vine was there in regular rows; the whole watered by two fountains, and surrounded by a hedge.

That vegetables and their cultivation were highly esteemed among the Grecians in their earliest days is evident from their Mythology. Minerva, their personification of Divine Wisdom, gave as the greatest blessing to mankind, the Olive Tree, and this fable is as old as the foundation of Athens, or about 1550 years B. C.; whilst Ceres, the sister of their King of Heaven, was invoked as the presiding Deity of Agriculture, and the original imparter of the Art to mankind. It may serve as an illustration of the same remark, to observe that almost every Deity had some plant held as sacred to him or her. The Oak was sacred to Jupiter: The Cypress, Narcissus, and the Maidenhair to Pluto; The Dittany, the Poppy and the Lilly to Juno: The Poppy to Ceres: The Olive to Minerva: Dog's Grass to Minerva: The Myrtle, Rose and Apple to Venus, &c. It is worthy of notice that the most admired human favourites of the God's were changed after death, or to avoid calamities, into Trees, or Flowers. Many other fables of their Mythology are poetical and beautiful. Flowers in general, they declared, sprang from the tears of Aurora. The tremblings of every leaf, the graceful waving of the grass, was attributed to the passing breath of Zephyrus; as the curl of the Waters was said to arise from the sports of the Naiads. I pass without description the Gardens of the Hesperides,* and of Adonis,+ for poetical fiction must give place to more sober facts.

We are without very clear information of the skill of the Greeks in cultivating their Gardens, or of their taste in disposing them, even during the splendour of their Republics.

The Academus at Athens, which was laid out by Cimon the

- * Virgils Eneid. iv. 484. Serv. ad. Eneid. Eccl. vi. 61. Pliny l. v. c. 5.
- † Virg. Georg. ii. 87. Ovid. Amor. i. 10. 56. Stat. Sylv. i. 3. 81.



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Athenian General, about four hundred and thirty years, before the Christian era, as well as other Gardens of which we have record, consisted of walks shaded by Plane Trees, watered by Streams, and enclosed by Walls.* The warlike manners of the people made them delight in the addition of the Gym nasium, where their exercises were performed. Fruit Trees were planted in them, not caring for the produce of which, we read that Cimon threw open his Gardens to the public.+ Epicurus, the philosopher of the Garden, as he has been called, died at the age of seventy-two, B. C. 270. His Gardens were celebrated as much for their beauty as for the Lectures he delivered in them. The scite of the one he possessed at Athens cost him eighty Minæ, or about two hundred and sixty pounds, no inconsiderable sum in that age. He had it laid out around his house, being the first of the kind introduced into the city. T Of their Horticultural skill the Geoponick writers, give us a favourable idea, for however empirical and accompanied by gross superstitions, they were aware of practices at present adopted and recommended. Thus Anatolius says, that if you wish an Apple Tree to bear much fruit, a piece of pipe should be bound tight round the stem. Sotian recommends the same, and to sever some of the largest roots when the tree is over luxuriant. They were aware of the necessity of Caprification, and bring wild Figs upon the branches of the cultivated Trees to prevent them casting their fruit, "wherefore, says Democritus, some insert a shoot on each Tree that they may not be obliged to do that every year." The knowledge of grafting which this and other passages intimate, was the acquirement of a period coeval with the earliest age of which we have any informaton. Of manures they had a correct knowledge, and when this was deficient, they turned in green vegetable matters, and even sowed Beans, for the purpose of ploughing them in, when grown up.|| They were very fond of flowers, which were used as ornaments

Pausanias b. i. 29. + Corn. Nepos in vità Cimon. ‡ Pliny b. xix.
c. 4. || Theophrastus viii. 9.



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upon all occasions; they cultivated Violets, Roses, the Narcissus, Iris, &c.* which were extensively sold at Athens, in a Market Place appropriated to their disposal.†

HESIOD is the most ancient author on the cultivation of the earth, whose work has descended to us. His History is obscure and uncertain. The most probable incidents of his life appear as follows. He was born at Ascra, in Bœotia, and flourished about the same time with Homer. He is said to have carried off a prize in a contest of Poetry with that writer. Being murdered and his body thrown into the Sea by his slayers, it was thrown ashore, and his fate being thus revealed, the murderers were detected by the Poet's dogs:

Hesiod is to be admired both as a Poet and Philosopher, we have here however only to consider him as an Agricultural writer. His Poem entitled "the Works and Days" Pliny considered as the first positively known work that contained directions for cultivating the ground, Tzetzes, who lived in the twelfth Century, in his Scholia on Hesiod, mentions two Poems by Orpheus, entitled "Works" and "Diaries," the latter of which from its title would promise to be of more utility than Hesiod's superstitious Calendar. It admits of considerable doubt whether Orpheus ever existed, if he did, he lived about the time of the Argonautic expedition, 1263, B. C. At all events, Hesiod's work is the earliest on Agriculture that has descended to us. He wrote a Treatise on herbs now lost, and there is strong reason to believe, "The Works," is mutilated and imperfect, for Pliny (b. 15.) adverts to Hesiod's opinion of the unprofitableness of the Olive; and Manlius in his Astronomicon refers to his Treatise on Grafting, and on the situations suited to Corn and Vines, none of which passages occur in any of our copies. From what remains, we can glean but small information as to the Agricultural practices

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^{*} Theophrastus vi. c. 5. + Aristophan. Acharn. v. 212.



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of the Age, the moral reflections and instructions being by much the most lengthy. Of any of the practices of Horticulture he is still more meagre. Timber was felled in Autumn. They ceased digging in the Vineyard, when from the heat of the weather, about the season of the Pleiades, the snails left the ground for shelter upon the Plants. The vintage was in the course of November. In common with all other Heathens he had a superstitious regard to lucky and unlucky days; the thirteenth day of the Moon, he considered favourable to planting, but not to sowing; the sixteenth and ninth were also propitious to planting.

That the work as known to us is not perfect, I think is further proved by no mention being made of the Olive, or of manures, nor even of the burning of stubble, which is perhaps the most ancient mode of ameliorating the soil.

I have not followed historically the divisions of the Eastern The Egyptians, the Chaldeans, the Medes, the Persians, the Macedonians, the Greeks, &c. as they successively rose into separate powers, were only off-sets of the same, or contiguous people, and practised the same Arts, and were of manners and habits modified perhaps by a slight difference of climate, but otherwise without change. Especially were there no alterations in the practices of the Arts of cultivating the soil, for these of primary importance to mankind were not subject to fickleness of taste, and were pursued in an almost unaltered climate and soil. The scattered fragments of information that have escaped to us concerning such practices have been therefore arrranged in one chronological series. From them we cannot but conclude that even in those early ages, some of the most recondite practices of the Gardener were known and followed. We need not be surprised that their Gardens were not more extensive, inasmuch that the number of plants known to