

Moyst.

&c. For I account moyfture in summer very needfull in the foyle of trees, and drought in winter, provided that the ground be neither boggy, nor the inundation be past 24 hours at any time, and but twice in the whole Summer and so oft in the Winter. Therefore if your plot be in a bank, or have a descent, make trenches by degrees, allies, walks, and such like, so as the water may be stayed from passage; and if too much water be any hindrance to your walks (for dry walks do well become an Orchard, and an Orchard them) raise your walks with earth first, and then with stones as big as wall-nuts, and lastly, with gravel. In Summer you need not doubt too much water from heaven, either to hurt the health of your body, or your trees. And if over-flowing molest you, after one day, avoid it then by deep trenching.

Some for this purpose dig the soyl of their Orchards, to receive moisture, which I cannot approve; for the roots with digging are often times hurt, and especially being digged by some unskillfull servant; for the Gardener cannot do all himself: and moreover, the Roots of Apples and Pears being laid neer day with the heat of the Sun, will put forth suckers, which are a great hinderance, and sometimes with evill guiding, the destruction of trees, unless the delving be very shallow, and the ground laid very level again. Cherries and Plums, without delving, will hardly or never (after twenty years) be kept from such suckers, nor Asps.

Grassie.

Grass also is thought needfull for moisture, so you let it not touch the Roots of your trees; for it will breed mosse; and the boal of your tree neer the earth, would have the comfort of the Sun and air.

Some take their ground to be too moist when it is not so, by reason of water standing thereon; for except in sower marshes, springs, and continuall over-flowings, no earth can be too moist. Sandy and fat earth will avoid all water falling, by receipt: indeed a stiff clay will not receive the water, and therefore if it be grassie or plain, especially hollow, the water will abide, and it will seem waterish, when the fault is in the want of manuring, and other good dressing.

This plainness which we require had need be naturall, because to force any uneven ground, will destroy the fatnesse: for every
soyl

soyl hath his crust next day; wherein trees and hearbs put their roots, and whence they draw their sap, which is the best of the soyl, and made fertil with heat and cold, moisture and drought, and under which, by reason of the want of the said temperature by the said four qualities, no tree nor hearb (in a manner) will or can put root; as may be seen, if in digging your ground, you take the weeds of most growth, as grass or docks (which will grow, though they lye upon the earth bare,) yet bury them under the crust, and they will sooner dye and perish, and become manure to your ground. This crust is not past 15 or 18 inches deep in good ground, or other grounds lesse. Hereby appears the fault of forced plaines, viz. your crust in the lower parts is covered with the crust of the higher parts, and both with worse earth: your heights having the crust taken away, are become meerly barren: so that either you must force a new crust, or have an evill soyl. And be sure you levell before you plant, lest you bee forced to remove, or hurt your plants by digging, and casting among their roots. Your ground must be cleared, as much as you may, of stones and gravel, walls, hedges, bushes, and other weeds.

Naturally plain.

Crust of the earth.

CHAP. III.

Of the Site.

There is no difference, that I find, betwixt the necessity of a good soyl, and a good Site of an Orchard: For a good soil (as is before described) cannot want a good Site; and if it doe, the fruit cannot be good; and a good site will much amend an evill soyl. The best site is in low grounds, and (if you can) neer unto a River. High grounds are not naturally fat.

Low and neer a River.

And if they have any fatnesse by mans hand, the very descent in time doth wash it away. 'Tis with grounds in this case, as it is with men in a common wealth: Much will have more; and, Once Poor, seldom or never Rich. The Rain will scind and wash, and the wind will blow fatnesse from the heights to the hollows, where it will abide, and fatten the earth, though it were barren before.

Hence it is, that wee have seldom any plaine grounds and low, a barren; and as seldom any heights naturally fertile. It is

unspeakable, what fatnesse is brought to low grounds by inundations of waters; neither did I never know any barren ground in a low plain by a River side. The goodnesse of the soyl in *Havla* or *Hollandernesse*, in *York-shire*, is well known to all that know the River *Humbe*, & the huge bulks of their Cattel there. By estimation of those that have seen the low grounds in *Holland* and *Zealand*, they far surpass all most Countries in *Europ*: for fruitfulness, and only because they lye so low. The world cannot compare with *Egypt* for fertility, so far as *Nilus* doth overflow his banks. So that a fitter place cannot be chosen for an Orchard, then a low plain by a River side. For besides the fatness which the water brings, if any cloudy mist or rain be stirring, it commonly falls down to, and follows the course of the River. And where see we greater Trees of bulk and bough, then standing on, or neer the water side? If you ask why the plains in *Hollandernesse* and such Countries, are destitute of wood? I answer, that men and cattel (that have put trees thence, from out of plains to void corners) are better than trees. Neither are those places with out trees. Our old Fathers can tell us how woods are decayed, & people in the room of trees multiplied. I have stood somewhat long in this poynt, because some do condemn a moist soyl for fruit Trees.

Psal. 1. 3.
Ezek. 17. 8.
Eccles. 37. 17.

Mr. Markham.

Winds.
Chap. 13.

A low ground is good to avoid the danger of winds, both for shaking down your unripe fruit. Trees (the most that I know) being loaden with wood for want of prouning, and growing high by the unskillfulness of the Arborist, must needs be in continuall danger of the South West, West and North-west winds, especially in *September* and *March*, when the ayr is most temperate from extream heat and cold, which are deadly enemies to great winds. Wherefore chuse your ground low: Or if you be forced to plant in a higher ground, let high and strong walls, houses and trees, as Wall nuts, Plane-trees, Oaks and Ashes, placed in good order, be your fence for winds.

The sicken of your dwelling house, descending into your Orchard, if it be cleanly conveyed is good.

The Sun, in some sort, is the life of the world: it maketh proud growth, and ripens kindly and speedily, according to the golden Term, *Annus fructificat, non iplius*. Therefore in the

Sun.

Countries.

Countries neerer approaching the Zodiack the Suns habitation, they have better, and sooner ripe fruit, then we that dwell in these frozen parts.

This provoketh most of our great Arborists to plant Apricot trees against cocks, Cherries, and Peaches, by a wall, and with tacks, and other a wall means to spread them upon, and fasten them to a wall, to have the benefit of the immoderate reflex of the Sun, which is commendable, for the having of fair, good, and soon ripe fruit. But let them know, it is more hurtfull to the trees than the benefit they reap thereby, as not suffering a tree to live the tenth part of his age; it helps Gardeners to work. For first, the wall hinders the roots; because into a dry and hard wall of earth or stone, a tree will not, nor cannot put any root to profit, but especially it stops the passage of the sap, whereby the bark is wounded, and the wood and diseases grow, so that the tree becomes short of life. For as in the body of man, the leaning or lying on some member, whereby the course of blood is stoppt, makes that member as it were dead for the time, till the blood return to his course, and I think, if that stopping should continue any time, the member will perish for want of blood, (for the life is in the blood) and so indanger the body; so the sap is the life of the tree, as the blood is to mans body: neither doth the tree in winter (as is supposed) want his sap, no more than mans body his blood, which in winter, and time of sleep, draws inward: so that the dead time of winter, to a tree, is but a night of rest: for the tree at all times, even in winter, is nourish'd with sap and growth as well as mans body. The chilling cold may well some little time stay or hinder the proud course of the sap, but so little and so short a time, that in calm and mild seasons, even in the depth of winter, if you mark it, you may easily perceive the sap to put out, and your trees to increase their buds which were formed in the Summer before, and may easily be discerned; for leaves fall not off, till they be thrust off with the knots or buds, whereupon it comes to passe, that trees cannot bear fruit plentifully two years together, and make themselves ready to blossome against the seasonableness of the next Spring.

And if any frost be so extream, that it stay the sap too much, or too long, then it kills the forward fruit in the bud, and some-

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times

times the tender leaves and twigs, but not the tree : Wherefore to return, it is perilous to stop the sap. And where, or when did you ever see a great tree packt on a wall ? Nay, who did ever know a tree so unkindly (that, come to age, I have heard of some that out of their imaginary cunning, have planted such trees, on the North side of the wall, to avoid drought : but the heat of the Sun is as comfortable (which they should have regarded) as the drought is hurtfull. And although water is a soveraign remedy against draught, yet want of Sun is no way to be helped. Wherefore, to conclude this Chapter, let your ground lye so, that it may have the benefit of the South and west Sun, and so low and close, that it may have moisture, and increase his fatness, (for trees are the greatest suckers and pillers of the earth) and (as much as may be) free from great winds.

CHAP. IV. Of the Quantity.

IT would be remembred what a benefit riseth, not onely to every particular owner of an Orchard, but also to the common wealth by fruit, as shall be shewed in the sixteenth Chapter (God willing) ; whereupon must needs follow, the greater the Orchard is (being good, and well kept) the better it is : for of good things, being equally good, the biggest is the best. And if it shall appear, that no ground a man occupieth, (no, not the Corn field) yeeldeth more gain to the purse, and house keeping (not to speak of the unspeakable pleasure) quantity for quantity, than a good Orchard, (besides, the cost in planting and dressing an Orchard is not so much by far, as the labour and Seeding of your Corn fieldes nor for durance of time comparable, besides the certainty of the one before the other) I see not how any labour or cost in this kind, can be idely or wastfully bestowed, or thought too much. And what other thing is a Vineyard, in those Countries where Vines doe thrive, then a large Orchard of trees bearing fruit ; or what difference is there in the juyce of the Grape, and our Syder and Perry, but the goodnesse of the soyle, and clime where they grow ? which maketh the one more ripe, and so more pleasant than the other. Whatsoever can be said for the

Orchard as
good as a
Corn-field.

Compared
with a Vine-
yard.

the benefit rising from an Orchard, that makes for the largeness of the Orchard bounds. And me thinks they do preposterously, Compared with a Garden that bestow most cost and labour, and more ground in and upon a Garden, then upon an Orchard, whence they reap and may reap both more pleasure and more profit, by infinite degrees. And further, that a Garden never so fresh, and fair, and well kept, cannot continue without both renewing of the earth and the herbs often, in the short and ordinary age of a man: whereas your Orchard well kept, shall dure divers hundred yeeres, as shall be shewed Chap 14. In a large Orchard there is much labour saved, in fencing and otherwise : for three little Orchards or a few trees, being in a manner all out-sides, are so blasted and endangered, and commonly in keeping neglected, and require a great fence ; whereas in a great Orchard, trees are a mutuall fence one to another, and the keeping is regarded ; and lesse fencing serves six acres together, then three in severall inclosures.

Now what quantity of ground is meetest for an Orchard, can What quantity of ground. no man prescribe, but that must be left to every mans severall judgment, to be measured according to his ability and will, for other necessities besides fruit must be had, and some are more delighted with Orchards than others.

Let no man, having a fit plot, plead poverty in this case ; What is no hindrance, for an Orchard once planted, will maintain it self, and yeeld infinite profit beside. And I am perswaded, that if men did know the right and best way of planting, dressing, and keeping trees, and felt the profit and pleasure thereof, both they that have no Orchards, would have them, and they that have Orchards would have them larger, yea fruit trees in their hedges, as in *Worcester-shire, &c.* And I think, the want of planting is a great losse to our Common-wealth, and in particular, to the owners of Lordships, which Landlords themselves might easily amend, How Land-Lords by their Tenants may make flourishing Orchards in England. by granting longer time and better assurance to their Tenants, who have taken up this Proverb, *Boich and sit, Build and sit* : for who will build or plant for another mans profit ? Or the Parliament might injoyn every occupier of grounds to plant and maintaine for so many acres of fruitfull ground, so many severall trees, or kinds of trees for fruit. Thus much for quantity.

A. All these square must be set with Trees, the Garden and other Ornaments must stand in spaces betwixt the trees, and in the borders and fences

B. Trees twenty yards asunder.
C. Garden Knots
D. Kitchen Garden
E. Bridge.
F. Conduic.
G. Staires.

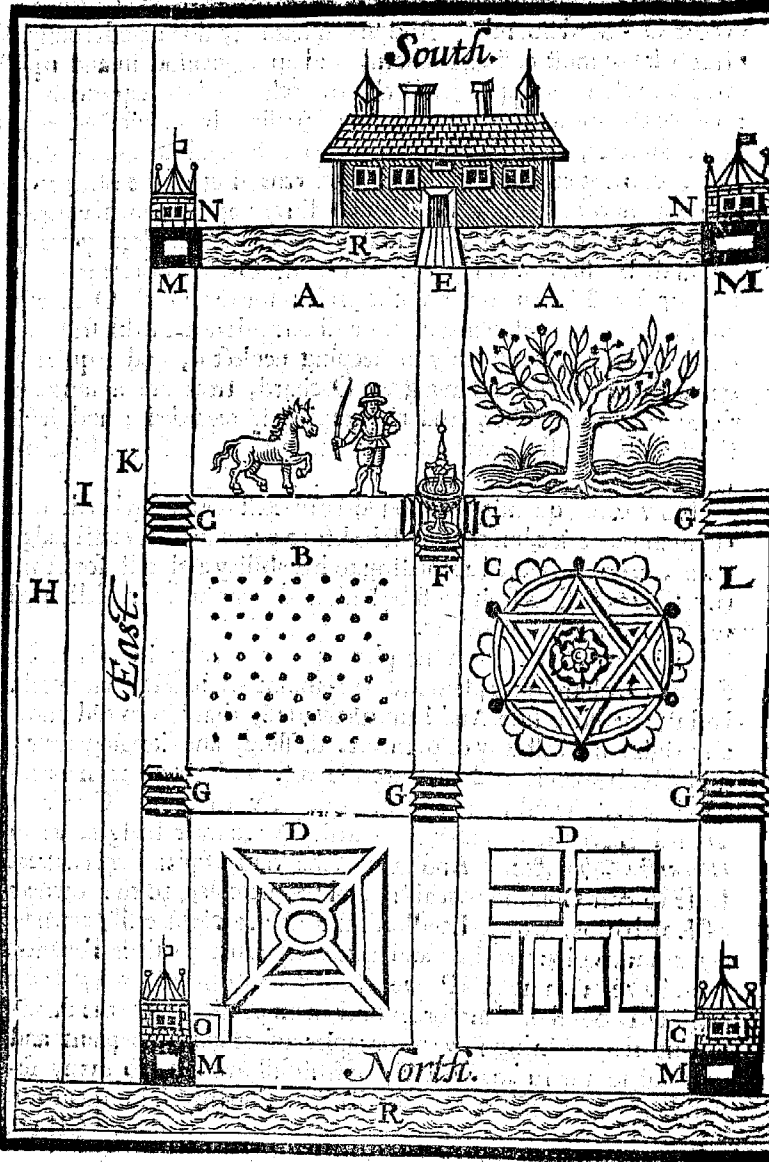
H. Walks set with great wood thick.
I. Walks set with great wood, round about your Orchard

K. The Out fence
L. The Out fence set with stone-fruit

M. Mount. To force earth for a Mount or such like, set it round with quick and lay boughes of trees strangely intermingl'd, the tops inward, with the earth in the middle

N. Still-house.
O. Gourd standing for Bees, if you have an house.

P. If the River run by your door, and under your Mount it will be pleasant.



CHAP. V.
Of the Form.

The goodnesse of the soil and site, are necessary to the well-being of an Orchard simply; but the form is so far necessary, as the owner shall think meet. For that kind of form where-with every particular man is delighted, we leave it to himselfe, *Suum cui que pulchrum*. The form that men like in generall, is a square: for although roundnesse be *forma perfectissima*, yet that principle is good, where necessity by art doth not force some other form. If within one large square, the Gardiner shall make one round Labyrinth or Maze, with some kind of Berries, it will grace you form, so there be sufficient room left for walkes, so will four or more round knots do, for it is to be noted, that the eye must be pleased with the form. I have seen squares rising by degrees, with staires from your house-ward, according to this form which I have, *Crassa quod niunt Minerva*, with an unsteady hand, rough hewen: for in forming Country gardens, the better sort may use better forms, and more costly work. What is needfull more to be said, I referre all that (concerning the form) to the Chapter 17. of the Ornaments of an Orchard.

The usuall form is a square.

CHAP. VI.
Of fences.

ALL your labour past and to come about an Orchard is lost, unless you fence well: It shall grieve you much to see your young sets rubb loose at the Roots, the bark pild, the boughs and twigs cropt, your fruit stolne, your Trees broken, and your many years labours and hopes destroyed, for want of fences. A chief care must be had in this point: you must therefore plant in such a soile, where you may Provide a convenient, strong, and seemly fence. For you can possesse no goods, that have so many enemies as an Orchard, look Chapter 13. Fruits are so delightfome, and desired of so many, (nay in a manner of all) and yet few will be at cost, and take pains to provide them. Fence well therefore, let your plot be wholly in your owne power, that you make

Let the fence make all your fence your self : for neighbours fence is, none at all, be your own. or very carelesse. Take heed of a door or window, (yea of a wall) of any other mans into your Orchard, yea, though it be nailed up, or the wall be high, for perhaps they will prove theeves.

Kinds of Fences, earthen walles. All fences commonly are made of Earth, Stone, Brick, Wood, or both earth and wood : Dry wall of earth, and dry ditches are the worst fences save pales or railes, and do waste the soonest, unlesse they be well copt with Glooe and mortar, whereon at Michael tide it will be good to sow Wall-flowers, commonly called Bee-flowers, or winter Gilly-flowers, because they will grow (though among stones) and abide the strongest frost and drought, continually green and flowering even in winter, and have a pleasant smell, and are timely, (that is, they will flower the first and the last of flowers) and are good for Bees. And your earthen wall is good for bees, dry and warm, but these fences are both unseemly, evill to repair, and onely for need, where stone or wood cannot be had. Whosoever makes such walls, must not pill the ground in the Orchard, for getting earth, nor make any pits or hollowes, which are both unseemly and unprofitable : old dry earth mixt with sand is best for these. This kind of wall will soon decay by reason of the Trees which grow neer it, for the roots and boals of great Trees, will increase, undermine, and over-turn such walls, though they were of stone, as is apparent by Ashes, Round-trees, Burt-trees, and such like, carried in the chat, or berry, by birds into stone walls.

Pale & Raile. Fences of dead wood, as pales, will not last, neither will railes either last or make good fence.

Stone walls. Stone walls, (where stone may be had) are the best of this sort, both for fencing lasting, and shrouding of your young trees, but about this you must bestow much Paines and more cost, to have them handsome, high and durable.

Quick wood and Moats. But of all other (in mine opinion) Quickwood and moates or ditches of water, where the ground is Levell, is the best fence : In unequal grounds, which will not keep water, there a double ditch may be cast, made streight and Levell on the top two yards broad for a fair wile, five or six foot higher than the soile, with a gutter on either side, two yards wide, and four foot deep, set without with three or four chesse of thorns, and within with Cherries, Plummes,

Plummes, Damsons, Bullis, Filberds, (for I love those trees better for their fruit, and as well for their form, as Privit,) for you may make them take any form. And in every corner, (and middle if you will) a mount would be Raised, whereabout the wood may claſſe, powdered with wood-binde, which will make with dressing a faire, pleasant, profitable, and sure fence. But you must be sure that your quick thorns either grow wholly, or that there be a supply betimes, either planting new, or plashing the old where need is. And assure your self, that neither wood, stone, earth, nor water, can make so strong a fence, as this at seven years growth.

Moates, Fish-ponds, and (especially at one side a River) with Moates. in and without your fence, will afford you fish, fence, and moysture to your Trees; an pleasure also, if they be so great and deep that you may have Swans, and other water Birds, good for devouring of vermine, and boat for many good uses.

It shall hardly availe you to make any fence for your Orchard, if you be a niggard of your fruit. For as Liberality will save it best from noisome neighbours, (Liberality I say is the best fence) so justice must restrain Rioters. Thus when your ground is tempered, squared, and fenced, it is time to provide for planting.

CHAP. VII.

Of Sees.

THere is not one point (in my Opinion) about an Orchard more to be regarded, than the choise getting and setting of good plants, either for readinesse of having good fruit, or for continuall lasting, for whosoever shall fail in the choice of good sees, or in getting, or gathering, or setting his plants, shall never have a good or lasting Orchard. And I take want of skill in this faculty, to be a chief hinderance to the most Orchards, and to many for having Orchards at all.

Some for Readinesse use slips, which seldome take Root, and Slips. if they do take, they cannot last, both because their Root having a maine wound will in short time decay the body of the Tree : and besides, that Roots being so weakly put are soon nipt with drought or frost, I could never see (lightly) any slip, but of apples onely, set for Trees.