

spent. British America, hath been bleeding in this cause from its settlement: We have spent all we could raise, and more; for notwithstanding the parliamentary reimbursements of part, we still remain much in debt. The province of the *Massachusetts*, I believe, has expended more men and money in war since the year 1620, when a few families first landed at Plymouth, in proportion to their ability, than the three Kingdoms together. The same, I believe, may be truly affirmed, of many of the other colonies; tho' the *Massachusetts* has undoubtedly had the heaviest burthen. This may be thought incredible: But materials are collecting, and tho' some are lost, enough may remain, to demonstrate it to the world. I have reason to hope at least, that the public will soon see such proofs exhibited, as will shew, that I do not speak quite at random.

(To be continued.)

As the New Horse-hoeing Husbandry, published in England some Years ago, by Mr. TULL, and now much used there, may be of great Advantage if introduced in America; we therefore hope the following Extract from that Book, may be agreeable to our Readers.

THE chief Art of an Husbandman is to feed Plants to the best Advantage; but how shall he do that, unless he knows what is their Food? By Food is meant that Matter, which, being added and united to the first *Stamina* of Plants, or *Plantulae*, which were made in little at the Creation, gives them, or rather is their Increase.

'Tis agreed, that all the following Materials contribute, in some Manner, to the Increase of Plants; but 'tis disputed which of them is that very Increase of Food. 1. *Nitre*. 2. *Water*. 3. *Air*. 4. *Fire*. 5. *Earth*.

I will not mention, as a Food, that acid Spirit of the Air, so much talk'd of; since by its eating asunder Iron Bars it appears too much of the Nature of *Aqua Fortis*, to be a welcome Guest alone to the tender Vessels of the Roots of Plants.

Nitre is useful to divide and prepare the Food, and may be said to nourish Vegetables in much the same Manner as my Knife nourishes me, by cutting and dividing my Meat: But when *Nitre* is apply'd to the Root of a Plant, it will kill it as certainly as a Knife misapply'd will kill a Man: Which proves, that *Nitre* is, in respect of Nourishment, just as much the Food of Plants, as *White Arsenick* is the Food of Rats. And the same may be said of Salts.

Water, from *Van Helmont's* Experiment, was

by some great Philosophers thought to be it. But these were deceived, in not observing, that *Water*, has always in its Intervals a Charge of *Earth*, from which no Art can free it. This Hypothesis having been fully confuted by Dr. *Woodward*, no-body has, that I know of, maintain'd it since: And to the Doctor's Arguments I shall add more in the Article of *Air*.

Air, Because its Spring, &c. is as necessary to the Life of Vegetables, as the Vehicle of *Water* is; some modern Virtuosi have affirm'd, from the same and worse Arguments, than those of the Water Philosophers, that *Air* is the Food of Plants. Mr. *Bradley* being the chief, if not only Author, who has publish'd this Phantasy, which at present seems to get Ground; 'tis fit he should be answer'd: And this will be easily done, if I can shew, that he has answer'd this his own Opinion, by some or all of his own Arguments.

His first is, that of *Helmont*, and is thus related in Mr. *Bradley's* general Treatise of Husbandry and Gardening, Vol. I. p. 36. 'Who dry'd Two hundred Pounds of Earth, and planted a Willow of Five Pounds Weight in it, which he water'd with Rain, or distill'd Water; and to secure it from any other Earth getting in, he covered it with a perforated Tin Cover. Five Years after, weighing the Tree, with all the Leaves it had borne in that Time, he found it to weigh One Hundred Sixty-nine Pounds Three Ounces; but the Earth was only diminish'd about two Ounces in its Weight.'

On this Experiment Mr. *Bradley* grounds his Airy Hypothesis. But let it be but examined fairly, and see what may be thence infer'd.

The Tin Cover was to prevent any other Earth from getting in. This must also prevent any Earth from getting out, except what enter'd the Roots, and by them pass'd into the Tree.

A Willow is a very thirsty Tree, and must have drank in Five Years Time several Tuns of Water, which must necessarily carry in its Interstices a great Quantity of Earth (probably many times more than the Tree's * Weight,) which could not get out, but by the Roots of the Willow.

Therefore the Two hundred Pounds of Earth not being increased, proves that so much Earth as was poured in with the Water, did enter the Tree.

Whether the Earth did enter to nourish the Tree, or whether only in order to pass through it (by way of Vehicle to the Air,) and leave the Air behind for the Augment of the Willow, may appear by examining the Matter of which the Tree did consist.

If the Matter remaining after the Corruption or Putrefaction

* The Body of an Animal receives a much less Increase in Weight than its Perspirations amount to, as *Sanctorius's* *Static-Chair* demonstrates.