

either that the deeper drain had the power of drawing water from a horizontal distance greater by the ratio of 8 to 5 than the shallower drain; or that the perpendicular descent of the water was more rapid into the 4 feet drain. In stiff loams and clays, a free ingress and egress to rain water can only take place after the establishment of that thorough net-work of cracks or fissures, which is occasioned in them by the shrinkage of the mass from the joint action of drains and superficial evaporation. These fissures seem to stand in the stead of porosity in such soils, and serve to conduct water to drains rapidly after it has trickled through the worked bed; it is possible, too, that in deeply drained clays of a certain texture the fissures may be wider or more numerous, in consequence of the contraction of a greater bulk of earth than when such soil is drained to a less depth.

The question of distance between drains is important on the score of expense, and it will be wise to err on the right side, but insufficiency of depth can only be remedied by a new outlay. It is well worthy of remark, that in Kent experiment and experience have rapidly induced the adoption of a system of parallel drains, considerably deeper, and less frequent, than those advocated by professed drainers, or in common use. I gave several instances of this practice in Kent, in the report of last year, already alluded to, and it is rapidly extending. Mr. Hammond stated, (Journal vol. 4, p. 47.) that he drained "stiff clay two feet deep, and twenty-four feet between the drains, at £3 4s. 3d. per acre," and "porous soils, three feet deep, thirty-three and a half feet asunder, at £2 5s. 2d. per acre." I now find him continuing his drainage at four feet deep, whenever he can obtain the out-fall, from a conviction, founded on the experience of a cautious progressive practice, as to depth and distance, that depth consists with economy of outlay as well as with superior effect. He has found four feet drains to be efficient at fifty feet asunder, in soils of varied texture, not uniform clays, and executed them at a cost of about £2. 5s. per acre, being 18s. 4d. for 871 pipes, and £1 6s. 6d. for 53 roods of digging. The above strengthens the observation, that many agriculturists have, a second time, drained their fields to a greater depth; it may, however, be doubted, whether any one has taken up deep drains, and placed them nearer the surface. Mr. Hammond, when draining tenacious clays, chooses the month of February for the work, when he lays his pipes, (just covering them with clay to prevent crumbs getting in,) and leaving the trenches open through March, if it be drying weather, by which means he finds the cracking of the soil much accelerated, and the complete action of the drains advanced a full season.

A difference of opinion as to the depth of drains exists with Mr. Smith, of Deauston, which, coming from so great a name, must have much weight. In a paper addressed to the Royal Agricultural

Society of Ireland, he says, "as to the distances of drains, you can take the range of limit as it is, or you may fix a more confined limit to suit your circumstances; but too wide a limit may lead to expense on the one hand or inefficiency on the other. From 18 to 21 feet is a safe range of limit, yet I dare say you must allow the full range in the first instance. There is a practice going abroad of deeper draining and wider distances, but that system I have proved thirty years ago, and thirty times over, to be insufficient, and it will never be sanctioned by men of science and experience in the matter."

The VEGETABLE MARROW.—I have been trying various experiments this Autumn, with ripe vegetable marrows, and I find they contain a rich, sugary, and farinaceous matter, and my taste, as well as that of those to whom I have sent them, very much approves of them, if cooked after the following manner:—Cut the marrows, into manageable lengths, take out the pith and seeds, and boil them in plenty of water, with salt; when well done, scrape out all the marrow, put it between two dishes, and squeeze out all the water, then mash it well, and add salt, pepper, a little butter, and a little milk; it is a dish fit for a queen. But my object is to recommend the vegetable for fattening pigs. We will suppose that early potatoes are grown, for to grow late ones any longer is a waste of land, and starving of the population, until better seasons come; the early sorts having been taken great care of during the Winter, and treated as recommended in my pamphlet, will be off the ground early. The seeds of the marrows may be sown about the 1st of May, in the open ground, in any warm corner. When transplanting time comes, the potatoes will not be near ripe, but proceed thus: lift a root of potatoes every five or six feet apart in the row, leaving six or eight rows of potatoes between the rows of marrows, and so on. I find, that with moderately rich land, I can grow twenty tons to the acre easily. When ripe, they can be stowed away anywhere, and may be boiled along with other food for pigs, for all pigs' food ought to be boiled. Wherever we find the cottagers to boil the food, they always have the best pigs, which are sooner fit for home consumption or for the market. The cottager may grow marrows where other things will not grow, such as on walls, trellises, poles, and over his cottage. The trouble of training will not be much, and would occupy his time in the evening. Landlords and farmers might also, perhaps, be induced to give prizes for the best produce, in the shape of a load or two of dung. There is no mistake about ripe marrows being first-rate food for pigs, and they form good human food. I have eaten half a pound dressed as above every day for these six days, and I like them much better than the dear and half-rotten potatoes we now buy.—James Cuthill, Florist, Camberwell, in *Gardeners' Chronicle*.