

# MY EXPERIENCE WITH NO-DIG GARDENING

by Mike Mason

(In a previous article – No-Dig Gardening - I described no-dig gardening. Briefly, one simply spreads compost or well-rotted farmyard manure on the land and grows crops in it. The worms do the digging and a vital fungus called mycorrhizal fungi links the roots of the plants to the sources of trace elements and nutrients which are essential for plant growth – and for our wellbeing. Mycorrhizal fungi are killed by digging (and by herbicides) so no-dig gardening is **essential** for plants to obtain all they need from the soil. The article which follows relates my experience with no-dig gardening since the year 2000.)

I have had my 110' x 38' allotment since 1973. When I took it over it had lain fallow for at least 10 years. I have not used artificial fertilisers, weedkillers or insecticides. So my soil has been truly organic since at least 1963. It took me 3 years to progressively bring the plot under cultivation, hand-weeding couch grass, nettles and brambles. For the next 23 years I dug the whole plot annually, excepting areas of permanent crops such as fruit trees, fruit bushes and rhubarb. I manured initially with pig manure then horse (spent mushroom compost) then since 1982 with large quantities of farmyard manure – well rotted, two to three years old. I dug-in the manure principally where the potatoes were to grow and limed the other areas. My depth of soil increased significantly and I removed most stones and all perennial weeds. Here, on top of the Chiltern hills, at 600 feet, we have about 1' of good heavy loam on top of heavy clay – excellent soil for most crops and moisture-retentive.

I then joined the Good Gardeners' Association and obtained Mr Guest's book "Gardening Without Digging". Since 2000 I have not dug my allotment at all and have followed, more or less, Mr Guest's methods.

The first problem was the sheer impossibility of producing enough compost to cover the whole allotment. I had always composted and used the compost as a mulch around fruit bushes – and flowers and shrubs in the garden. However, the quantity, from grass cuttings, weeds, vegetable tops and peelings, spent flowers, etc was not great. In principle, if one is able to hoe regularly there should be no weeds for the compost heap anyway.

I therefore decided to mulch my allotment with farmyard (ie cow) manure, rather than compost. Since 2000 I have applied one or two loads per winter, each one being a trailer load weighing about 3 tons. It took 3 years to cover the whole plot, with some areas such as the asparagus bed, the runner bean area and the potato patch receiving a covering most years. I spread the manure about 3 inches deep.

I had previously had some experience of this method since for about 15 years I had covered my asparagus bed (38' x 7') with manure every winter. Since the asparagus roots were near the surface I could not hoe deeply so resorted to smothering summer weeds with manure and feeding the asparagus at the same time. I had noticed how the manure had broken down with the passage of time, leaving a black friable soil similar to grow-bag compost. In season I pick about 1 Kg of high-quality asparagus every 3 days. So that experience was useful and now, after covering the whole plot with farmyard manure since 2000, my whole allotment is like my asparagus bed.

Now for the crunch question – what are the crops like? I can honestly say they are better. I have carrots which are enormous (up to 3 pounds 13 ounces) despite the difficulty of growing carrots in non-sandy soil. Potatoes are very good most years. Marrows, pumpkins and vegetable spaghetti are enormous. Brassicas do well in general. Onions, shallots and garlic give huge crops. I never water runner beans and climbing French beans but have enormous crops. We have had weather going from one extreme to the other since 2000 so comparisons are difficult, but I have the impression that my crops are definitely better than they used to be.

My no-dig method, substituting a mulch of farmyard manure for digging, has meant a net reduction of effort, since I save the huge task of digging nearly the whole plot, but still have the task of transporting and carefully spreading mountains of manure – and more of it these days.

One major advantage is the ease of weeding, since the weeds come out of the friable compost soil very easily. (I am sometimes away for extended periods and the weeds grow in the absence of regular hoeing.) I can't emphasise enough the importance of the ease of weeding. Also, there are fewer summer weeds anyway since the carpet of manure, where it has been freshly-applied, prevents most weed seeds germinating. I don't bother to remove smaller summer weeds in the winter – I simply smother them with manure. However, the manure can also contain the seeds of several "farmers' weeds" such as fat hen and nettles and they can be a problem. The manure also contains a few small stones which are found lying on the surface after a year and I then remove them. The manure has no odour, being well-rotted. It is also concentrated, with its straw content being almost completely decomposed by the time I receive it.

I saw that potatoes would be a problem, since one has to dig to gather the crop. I decided to abandon crop rotation of potatoes and to use the same plot year after year to avoid disturbance of the soil in the rest of the allotment. Furthermore, to avoid disturbance of the soil caused by earthing up the potato plants, I cover the patch with porous landscape sheeting, making a hole for each tuber. This results in a few green potatoes which I then use for seed the following year. When digging up the potatoes I try to disturb the soil as little as possible. Before placing the landscape sheeting I roll the new carpet of farmyard manure to prevent damage to the sheeting.

I also decided to treat seakale in a similar way to potatoes, ie have a permanent patch (38' x 5'), since I have to dig up the roots every December for forcing in the greenhouse then put back the roots at the end of March. Moving the seakale patch results also in unwanted plants growing from fragments of root left in the ground, so it is better to confine the seakale to one permanent area.

I generally avoid disturbing the soil, cutting off brassicas and beans at ground level and leaving their roots in the ground. Large annual weeds receive the same treatment. When lifting parsnips, carrots and leeks I simply insert the spade vertically to loosen the vegetable then pull the vegetable up, treading down the soil afterwards. I lift dandelions and docks in the same manner.

I rotate most crops but have permanent beds for strawberries, rhubarb, runner and French beans, potatoes, Good King Henry, seakale, fruit trees and fruit bushes. All the latter receive a good mulching of manure each winter. None of them seem to suffer from lack of crop rotation.

As for pests, I have lots of slugs – but I did before I converted to no-dig gardening and my plot does not seem to have more slugs than do neighbouring plots. On the good side, I have noticed far more worms.

One big advantage of leaving the manure on the surface, rather than digging it in, is moisture-conservation. Our summers seem to be becoming drier in southern England (especially 2006 but not 2007 and 2008!) and moisture conservation is ever more important. Also, I never have to water runner beans and climbing French beans – nor anything else, so that is a big saving of effort.

My experience with no-dig gardening may not be typical in that I started with soil which was free from perennial weeds and stones, soil which had been very well manured and dug for 26 years. I may have destroyed much of the mycorrhizal fungi by digging, but the soil was otherwise in excellent condition.

An incidental advantage of annual applications of farmyard manure is that trace elements in my allotment soil are replenished by trace elements in the manure. The trace elements come, of course, from my friendly farmer's fields, so I am robbing him. Certainly my crops taste good. This must be

partly due to their freshness but may also be due to the abundance of trace elements and nutrients in the soil in which my crops are grown.

I do have a problem with slugs and snails and have to use slug pellets on especially vulnerable crops such as asparagus. I grow many such crops under fleece and that prevents birds from eating snails which have eaten the slug pellets and reduces the dissolving of the pellets by rain. For potatoes, I take slug avoidance action by growing them under fleece until the end of May so that they will crop early – and be protected from frost. I lift them in August before the slugs have ascended from the damp clay below. I would have a problem with slugs even if I did not apply manure since our loam on clay is paradise for slugs.

One cannot sow small seeds in manure of course, so for carrots, parsnips, radishes, turnips, swede, beetroot, etc I choose a strip of land which was manured in previous years and the manure has broken down into a friable compost. However, I do sow many vegetables directly into the fresh manure layer – onions, shallots and garlic for example. For others I start them off in a seed bed and plant them out in the fresh manure - brassicas and leeks for example. For runner beans, climbing French beans, sweet corn and the marrow family I start them off in pots then transplant them directly into the manure. A trick with broad beans and peas is to start them off en masse in large pots of compost then transplant them into the manure when they are about 6 inches tall, after hardening-off. Another trick I am currently experimenting with is to form a small vee in the newly-applied manure, fill it with compost from the garden centre then sow small seeds in it. So far it has worked brilliantly with sugar peas and carrots. All the vegetables I have mentioned grow very well. They seem to love the manure then force their roots through to the soil beneath in search of whatever else they need for their growth.

Has it been a successful experiment with no-dig gardening? It has. I shall continue. I feel sure that the lack of disturbance for a few years has enabled the mycorrhizal fungi to re-establish themselves in the soil of my allotment. Thank you Mr Guest and the Good Gardeners' Association (01453 520 322) for introducing me to this better way of gardening.

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