

## Breaking New Ground

### - or how to turn a 'forgotten jungle' into a 'cultivated allotment plot'

There comes a time when we allotment gardeners have to bite the bullet – and break new ground, or rather break old ground that is either turf, a mixture of turf and a few interesting perennial tap-rooted weeds or a nightmare vision of the former, plus bumpy ground, old fruit bushes and the inevitable brambles.

Unfortunately, this is often at the start of our tenancy and with little if any allotment gardening experience to fall back on. Inheriting a plot that has long since 'lost it' is the norm rather than the exception; fertile soil and the wet but temperate British climate being ideal for nature to run riot in a couple of years or less - when left unchecked.

It is thus the fortunate few who inherit a perfectly cultivated allotment plot – and even they sometimes don't always realise quite how 'stuck-in' they must get, to stem the tide of mother nature, creating not only a plot to be proud of, but one that will grow good crops, whether that be vegetables, fruit, or as is traditional - a combination of the two.

Times have changed in allotment gardening; with a more varied approach to the use one might make (within the tenancy agreement) of the 'resource' that is 10 poles, 1/16 acre or 2,727 sq. ft of prime land (a pole is just under 16' 6" or 5m). The bottom line remains though, that of producing edible produce! To this end, here are some ideas, general rules and practical help on 'breaking new ground' as well as becoming an allotment gardener.

#### **Decide on a style of garden**

Take time to save time (too few do). Walk around and up and down the paths of a wide range of plots, looking at the way others have tackled the problem. There are many styles from traditional 'dug-all-over' (for maximum and efficient vegetable crop production), 'deep-beds with gravel paths' to small dedicated areas of vegetables, herbs, flowers, fruit bushes and trees.

Traditionally, allotment plots are 'dug-all-over' with few if any cross paths, and often have a row or two of raspberries and fruit bushes near one end with rhubarb (and perhaps horseradish) always in one corner. This is not by accident, as once fully cultivated this type of plot is relatively low-maintenance – possibly surviving with just one annual dig. As little as 50 years ago, all plots were tenanted, newcomers might be given the worst and have to earn their stripes and a working man might only be able to keep his family fed properly by becoming expert at using that space as efficiently as possible - there would be little wasted space! Think wind, think rain and drainage, but most importantly think light and shade – vegetable and fruit crops need light! Soft fruit bushes and canes might be positioned mid-plot to act as windbreaks for instance, but while happily shielding it from wind, might also reduce its light.

Decide on the style of garden *you* are aiming for. Then consider *your* options. Do you have a shed, plan for a greenhouse or cold frame? If so, decide their positions (glass is best kept well away from public paths) and when you plan to tackle them. Likewise, consider an area for a compost heap or proper New Zealand bins – or at least a staging post for manure deliveries next to the best access road or path – 50 to 100 sq. ft is an average allowance, don't skimp unless you really need every square foot for growing).

#### **Existing fruit bushes, trees and canes**

First consider cutting down unwanted fruit bushes, brambles, raspberry canes and any small trees. It's always worth getting an opinion on fruit bushes or trees before removing them as although they may look quite poor and neglected, if you like their fruit, very often a good pruning and root area dig-over can revive them to produce excellent fruit again within one season. Alternatively, if you decide to re-arrange or move currants, cuttings can be taken (some don't like being moved e.g. gooseberries). Plan to move raspberry canes (suckers) at

the right time of year (Jan, Feb, pref. During wet weather) into a single or double row (prepare a well-composted trench in advance). Take advice on blackberries, these are generally very nice to have at one end of a plot (under control) but not in the middle or edges! Finally, if in doubt about what is on your plot, even under a veritable forest, find someone knowledgeable to ask – valuable specimens might just be awaiting your arrival and their revival!

### **How much do you aim to tackle in the first season?**

If the plot is wild and grassy, full of deep-rooted perennial weeds (e.g. large dock and thistles)\*, decide how much you are likely to be able to dig and clean in one season – be circumspect! It's certainly not a big problem to kick-off by cutting down and tidying grassy or rough areas, leaving it until the next year or for wintertime, when cultivating, planting, watering and cropping are not taking up your time... but do not just do a very rough dig, lifting and turning sods, leaving the perennials. If left for six months, it'll be just as bad as before, yet bumpy and unmanageable with weed roots that are twice as hard to get out in one piece – if you can find them! *Either dig and weed it properly, cover it or just leave it alone...* The beginning of the allotment season is reckoned to be early Feb (broad beans) but to get at least a reasonable range of crops in, aim to have a decent area dug over, cleaned and cultivated ready for planting not much later than Easter.

### **Weeds – not all bad news!**

When a piece of ground is called rough or dirty, it implies difficult perennial weeds, couch grasses (twitch) and maybe unwanted wild brambles and tree roots. The latter two should have been cut-down and rooted out; a good tool to borrow for this is a mattock; the former awkward perennials should be distinguished\* from annual weeds, benign grasses and clovers. In many ways these are beneficial: they bind the soil over winter, helping to hold moisture near the surface in dry spells and preventing water-logging in wet ones. If turned in at the right time (at least a couple of months before planting, earlier if a dry spring) they provide good humus forming matter, nitrogen, potassium, phosphorous and other minerals i.e. 'green manure'. When it comes to planting crops, they should already be well rotted into the soil else removed and composted elsewhere – not burnt! If you are creating a seedbed then one certainly doesn't want much 'detritus' in the soil, even if it is half rotted small annual weeds. This 'in-situ-composting' detracts from the soils ability to supply needed nutrients and bacteria – the soil structure and nutrients should be 'in-place' by then – that's the aim of the game. From the moment the annuals are turned in or removed, try not to walk on the soil, especially in wet weather – use a plank.

### **Tackling large areas of grass and rough (dirty) ground.**

There are a few ways of tackling weedy, grassy ground. But first it is best said that the time to turn dirty weedy ground into a fine looking fully cultivated plot is two to three seasons - and a lot of work. If you really don't think your commitment is at or close to that level it might be best to consider allowing someone else to have that allotment garden resource – they are becoming more popular and quite scarce in some parts of the country. Methods:

- 1) Set it aside for a year and half (no more than two and a half) covered in heavy carpet or black plastic (heavy DPM). Provided it is held down flat, does not blow away or succumb to UV damage in that time, will then have dealt with the majority of difficult weeds, especially thistle and dock and have made a good impression on much of the bindweed or ground elder. This gives you a fighting chance provided you thoroughly dig the plot over, removing any live weeds as soon as it is lifted. Additionally, the rotted weeds will have provided good fertiliser and humus to the

soil. Don't leave carpet for much more than 24 months, if it too rots in situ you may well live to regret it! You can cover the edges of DPM with soil to keep it down, but again, this is not advised with carpets, as it will soon become part of the problem. Carpets are best as they allow some moisture penetration to maintain the rotting process. *Don't use foam or rubber backed carpets.* Watch for the pile starting to drop out or the propylene backing weave breaking down badly under UV light – lift, bag and dispose of immediately.

- 2) Rotavate or dig?. Nearly as controversial as bonfires, since unless the plot is very clean and well cultivated to start with, this will just break all the perennial weeds and grass roots up (bindweed, thistle and dock particularly), throw it about and bury it everywhere, creating a nightmare weed lawn again a few weeks after it next rains! Most live to regret using this *modern mechanical marvel* on an allotment plot full of turf and perennial weeds. If the weeds are simply annual varieties and light grasses (rather than couch) then it can be a fast way to prepare the plot – though frowned on by many traditional allotment plot holders - many are out for a good workout these days as well as good fresh crops; *taken steadily*, a good dig does wonders for strength, stamina and general fitness (remember that working men would have been hardened to physical labour from a much earlier age). If digging/weeding, make a point of standing up, taking a stretch and a look around at regular intervals – don't wait until you ache!
- 3) Cut the top turf/weed layer off with a spade. Then 'clamp' the turfs (stack back to back in a regular heap, cover with DPM or heavy carpet and leave for 18 months to 2 years) – the result? – perfect loam! Then one can dig over more easily the ground, removing the big weed roots by spot digging as you go – those big tap roots must come out, preferably 'whole from the hole'. Sieve out with a fork anything that looks like thistle, dock, cow parsley, buttercup, bindweed, or ground elder – indeed anything perennial that looks the least bit alive – apart from the worms of course – chuck them onto freshly dug ground, they'll live. If there were turfs on the top then the ground should have worms beneath – always a good sign. The first dig should be as deep and as thorough as your spirit and strength allows – but don't attack the subsoil layer unless its full of deep tap roots or bindweed.
- 4) Remove and knock out turfs, the top few inches, preferably onto a plank, corrugated iron or plastic sheet. The theory is that the soil around the turf and weed roots is the most fertile and rich in nitrogen and humus. So return it to the plot, having shaken out the weed and root growths, which then will compost much faster. Provided these are added to a good 'hot' aerobic heap, seeds and root weeds should be killed off. Otherwise, a long rotting period in a 'cold' heap, as in the 'clamp' method above should be used – these will eventually produce excellent compost. Before being used, material from this style of composting should be sieved, and any live weed recycled through the process a second time.  
Then check over the top surface for missed deep rooted weeds, chase down any tap-rooted weeds and especially fork carefully right under areas of bindweed, ground elder etc., attempting to remove every trace – so it's said, 1/10<sup>th</sup> inch will grow again! Break up any large clods of soil, rake off the finished area and if possible, leave to settle a while before planting. Once levelled-off and ready, use a plank to walk on it for planting – you have spent a lot of energy aerating it!

### **Deep beds/ raised beds – what are they and where are the benefits?**

These are promoted (principally by organic gardeners) as a way of providing easy access to a growing bed so that walking on the soil is unnecessary – avoiding compaction. They are particularly suited to plots running down a slope. Usually running across the plot and being

no more than 5 ft in width, the soil is mounded up (Bob Flowerdew method) or contained by raised borders. Paths between the beds are often first sheeted with a weed suppressant (e.g. Mypex) before being mulched heavily with sand, pea-shingle, stones, wood chips (often available free on-site) or bark.

Provided that deep-rooted perennials are dug out properly to start with, annual mulching and the lack of compaction soon leads to good aerated soil with a high humus content and theoretically at least, few serious weeds – all without the necessity for annual digging. Light tilling and removal of annual weeds before planting and then around plants as they mature is necessary, but the mulching suppresses deep growth of the rapid spreading weed types. Since some plots might be overrun with brambles and perennials, in order to ensure a nominally weed-free bed to start with, it might be wise to treat the newly dug area as a ‘stale seed bed’ first e.g. create a good tilth, rake it flat and then keep it damp for a couple of months – just to see what comes up! Weed that thoroughly and finish constructing the raised bed.

Creating a set of raised beds naturally lends itself to a longer-term project, inviting a systematic approach to cultivating an allotment plot in stages over several seasons if the time to prepare the whole plot is limited. A first working bed can be prepared and sown, whilst other areas are undergoing the more thorough weeding that this form of gardening requires, remembering that the payback is not having to do the annual dig from end to end, nor the application of *heavy* manures. Don’t skimp on the preparation of paths, it will amaze a newcomer how some things can grow through almost any gap, and then sprout into a veritable jungle – nature is all powerful! Annual mulches should be applied at the right time – they can keep moisture out of the soil just as well as in – take advice. If using the banked-up method without solid borders, choose suitable varieties to grow on the sides, where some faces will get more direct sunlight and others less.

And remember, deep-beds are not necessarily a better, nor worse style of gardening than a ‘dug all over plot’ – just different! They do, however, reduce the total area under cultivation.

### **Synthetic detritus**

It is quite likely that your new plot may have some man-made rubbish on or in it. Bottles or glass from old cold-frames/greenhouses is just one type of rubbish to be systematically cleared. Synthetic carpet fibres (polypropylene and nylon mainly) might be another annoyance. Most synthetic materials like this will begin degrading seriously due to ultraviolet light after a couple of years, even UV shielded plastics will break down seriously after 3 or 4 years, but unfortunately they tend to go brittle and break-up first, causing an eyesore at best if not a serious problem in the soil. The worst seems to be large sheets of clear plastic possibly used for make-shift greenhouses and cold-frames – you may well decide to use such materials, but the minute they show the *first signs* of breaking down, pack them into bin liners and dispose of them properly. They can go from a manageable problem to a nightmare in a month or so – to see your plot covered in a million fragments of plastic that just break up further when picked up will bring tears to your eyes. Don’t wait for that carpet or DPM covering to get blown to the winds, bag it!

### **Fertilising your new plot**

It is a personal choice whether you go for gold and spread manure or good compost as soon as you’ve dug and readied your plot for a first season. Intensive vegetable growing takes a lot out of the soil and allotment gardeners tend to be pretty adamant that a lot has to be put back on a consistent basis. Typically, traditionalists spread one large trailer load (a lot) of cow/pig manure over their 10 poles every year, before the winter sets in. Others say two loads (a heck of a lot!), whilst still others might get by using a couple of smaller loads of well composted horse-manure, leaf mould as well as long-term composted sods and annual weedings.

Proprietary concentrated fertilisers (e.g. chicken manure based products, specialist organic concentrated pellets etc.) can also be used, but should be sourced and costed wisely. (Unless you run a large vegetarian restaurant, don't expect your annual kitchen waste to do much more than a small herb bed).

For the following reasons, it is possibly not worth bothering with manure for the first year:

- If the plot has been fallow for more than a year or so, a lot of weed top and root growth will have rotted back into the soil – this is evident after a couple of years under carpet allowing some moisture through – the soil has noticeably good organic content and grows good crops for a year or two. Equivalent to a green manure.
- Provided the turfs and weeds have been knocked out during digging, a lot of goodness will have been returned - the loam around grass roots and some other weeds is about the best there is. Thus, don't dig when it is too wet to quickly shake any earth out of the sods or weed roots - or if you do, then turn the whole sod back under (deep) so it rots over winter (about the best technique in a very wet Autumn).
- The last tenant probably manured the plot the season before leaving – it can't be *that* bad!
- After the long slog of a first dig, it may be too much like hard work or too late to do any good! Time is perhaps better spent weeding thoroughly, properly clamping the turfs that came off or building some large compost bins for the horse manure deliveries.

If, when the soil is slightly damp, you can't turn up plenty of earthworms then that might be a sign someone has taken all the goodness out of it or used heavy chemical fertilisers (unlikely) – maybe then consider your options provided you have time. One year without a heavy treatment of manure or fertiliser will not destroy the soil or mean you'll fail to produce good crops – the first year may well bring superb results due to the *rest* that the soil has had! Consider planting a green manure crop in the Autumn for over-wintering, digging it back in during early spring – this improves soil structure, nutrients, prevents water-logging and weed growth. Barren soil is an open invitation for pernicious weed growth.

## Tools

My personal favourite – in fact indispensable tool - is a *very* strong, thick tined fork - a bedding fork is useless for much more than turning over light, well dug ground. For breaking new ground an all steel builders fork isn't overkill! Whilst a spade is useful in some lighter soils, or for the bigger built types, a *good* fork is a must. What do I mean by a good thick tined fork? - *Not* an obviously weak handled fork. *Not* one with short worn out tines. *Not* one with skinny, overly sharp, pointed tines – and definitely not one that you are constantly worried about breaking – that simply wastes your time and prevents real progress being made. Once the ground is broken up, the fork should be used to 'riddle' the larger weeds roots out of the ground – short tines don't get down to them and they fall off thin ones. The tines should be rectangular or square section, not round. Sharp tines kill worms and split up weeds, flat blunt ones just push them aside.

If buying a new fork, don't buy a plastic handled one, don't be persuaded that stainless is better, some are but cheap ones (the majority) are the wrong type of stainless and the tines bend. Buy a forged steel product if possible, not a pressed out or spot welded one – good ones can be had for the same or little more than a rubbish make – *quality will out!* A short handled Bulldog™ is a good buy. Don't buy a fork with a long handle unless you are very tall – they are obviously weaker and will make your back ache. Your best, not your worst fork should be for the allotment - most domestic gardens don't demand a strong fork – allotments do.

A *strong* spade with a reasonably sharp edge is often useful, but only essential occasionally. Used for straightening paths, edging and useful for creating beds. Also very useful for distressing fibrous top growth and stems prior to composting – e.g. brassica stems, runner

beans at the end of the season. Once smashed into bits, those apparently woody stems soon succumb to nature's way (fungal and microbial breakdown). Shovelling soil around is something only done occasionally and a spade is then a good substitute for a shovel. A mattock, as mentioned, is very useful for rooting out trees and fruit bushes like gooseberries – far better than a pick-axe, which is a dangerous and unwieldy tool. Also used for smashing up woody stems – great therapy at the end of the season!

A *rake* is also considered pretty well essential – once you've broken and weeded a small area, rake it flat. This reduces moisture loss in dry weather; if left rough, after a wet period it could dry out ankle-breaking rough! Don't go for a fine tilth though, unless creating a seed bed – this tends to seal the surface, caking hard and preventing air and moisture entry/egress. A rough levelling rake over, without dragging all the stones to the edge is what you're after.

A *small pruning saw*, if trees or bushes need removing.

A *weed receptacle* - an old plastic doggie basket or broken wheelbarrow is perfect (throw your perennial weed roots in it, not on the paths to get trodden back in!)

## **Stones**

To remove or not – that is the question? Generally, unless large stones from the flint layer come up, anything less than an inch or so should never be removed (drainage, cooling and structure). Many will not bother removing any stones - it's a bit like painting the forth bridge. Try to rake the soil and not the stones – if they do pile up, just pick out the really big ones and skate the rest evenly back over the plot – during the next dig some will go back in and others will come to the top...

But if creating a stone path between beds, then the rake is the tool for gathering them and with a bit of skill, even grading them to some extent. Although the subsoil can be penetrated to create drainage where necessary, it's not a good idea to fork out large stones in any underlying clay/flint layer – fortunately, it's not easy either. It's usually when chasing down large tap-rooted weeds or heavy runs of field bindweed that brings the larger stones up – a double-edged sword unfortunately.

## **Bonfires**

An allotment plot holder's divine right? Maybe today but unlikely tomorrow! Traditionally, perennial weed roots and even rough grass turf is burnt and sin of sin, annual weeds. What *has* to be burnt by common consensus are certain diseased crops, and possibly some weeds that have produced seeds e.g. tall grasses, although a good *hot* aerobic compost heap can even kill these off. Whatever you do, aim to have as few bonfires as possible (two, maybe three a year is all that is really necessary) and always allow vegetable matter time to dry out first – you'll be amazed how little is left to burn and how quickly it all goes up. Unless very heavy rains persist, bonfire piles do not get saturated throughout and the top quickly dries again – and they can be covered easily with carpet, wood to be burnt or an old tarp. Choose your moment, check the wind direction and try not to annoy your neighbours - or the local townsfolk. Have a good flare-up occasionally if necessary – but don't smoulder heaps of dank vegetation for days on end. (Some allotments already have a strict ban on bonfires at certain times or seasons).

## **The Goal**

Remember, you are trying to build a layer of weed free fertile topsoil, 9" to a foot thick, with a good loamy crumb structure, teeming with beneficial bacteria and micro-fungi. Mix the soil up depthwise, and plotwise to avoid areas of poor mineral, pH and nutrient balance. Then let the worms, bacteria and weather do its job, possibly with a good Autumn sowing of green manure. Apart from serious woody stems and diseased plants, give nature a chance to break-

down and compost as much vegetable matter as possible – allow the space– then use it a year or two later to re-vitalise your soil.

#### **\* Perennial weeds:-**

... learn to distinguish potential perennial nuisances...( it takes most newcomers a while learning to spot the devil incarnate at thirty paces!). Bindweed, both field and hedge varieties (convulvulus) come into this category, as does Dock - until you get stung, when its leaf-juice becomes the perfect panacea. Nettles, in the right place, are useful and are a good indication of fertile soil as well as excellent composting matter. Comfrey, perhaps in the same category as nettles, is valued highly by the organic gardener for general composting and making comfrey concentrate liquid feed but having a taproot akin to Dock. Another character is Horseradish – love it or hate it – very hard to eradicate due to its deep roots. And don't be fooled by Buttercup – remove all traces, it's a fast breeder and if it gets in amongst strawberries – move them - dig it out and then dig it out next year too.

A plot infested with Thistles can be quite (very) disheartening – they have lateral roots that snap off and if left in the ground, soon sprout verticals. One old farming tip I have heard of, is to plant hemp heavily over the area. A carpet mulch for at least 2 years can solve a heavy thistle problem– but both these methods require losing production for a while – planning your long term strategy is often necessary to avoid repetitive problems.

Cow Parsley should be dug out thoroughly too – it tends to re-appear.

Bindweed (convulvulus) takes two forms at least, field and hedge varieties and the latter climbs high and is very pretty when in flower. This is, arguably, easier to eradicate having thicker white roots that can be teased out more easily, whilst the other type has thinner white roots that break up just by looking at them! It is essential to chase this 'field' variety right down to its thicker brown roots – keep digging these out for a year or two wherever found and despite what some pessimists say, you will definitely make inroads into its dominance over your plot! However, it is virtually a double dig trenching operation to get down deep enough over a large enough area – your choice - they lie down at or in the subsoil level and can survive years until a sufficient rainfall livens them back up – they have been seen yards down by the 'navvies' building railways. A long term carpet mulch or systemic weedkiller can also make them think a bit, but is unlikely to prove a permanent solution.

#### **Recommendations:**

- When edging your plot's paths, go deep, trying to remove any thick root-runs coming in from the paths – do this every year, creating a trench and throwing up a bank raising the level of the plot, deep-bed style (it is tempting to then rake stones off the plot into these trenches, but unless subsequently removed, you make regret it!)
- Use a combination of the above tactics, where appropriate – and stick at it if you have the will, time and strength.
- Attack specific bad areas vigorously, you will find that this improves matters for a larger area around due to upsetting underground lateral root systems.
- Don't rotavate a plot infested with bindweed, buttercup or couch grass.
- Don't take on a weed-ridden plot unless you have the commitment to turn it around over a number of years – take half a plot and work it, or wait for one that is in good condition.
- Perennial roots will all die if left in the sun or daylight for a few days and they stay dry – immediate burning is just not necessary – when dead they can be composted.