Approaches to Cultivation

This is an attempt to collate the various fundamental approaches of different plot holders on our site. The names of the contributors can be found via the copyright and acknowledgements link at the end of this article. There is no attempt to favour particular methods. It is probably mainly of interest to new plot holders.

Growing Objectives

Objectives vary, mostly depending on time pressures or other interests. They typically include:

- People who try to eat in season as much as possible, trying to harvest crops all the year round insofar as this is possible
- Summer-orientated (little or no winter crops)
- Autumn, winter or spring bias when people are likely to be away at important times in the summer
- People who have limited time available and wish to minimise weeding and watering requirements
- Non-edible cultivation. A number of plot holders devote some space to impressive displays of flowers, and one grows various shrubs for foliage for flower arranging. In addition, one allotment holder grows willow, coppicing it for pea and bean supports.

Plot Layouts

There are arguably three main types of layout:

- A single large area, often with long rows (up to 30 feet)
- The plot is divided up into rectangular beds that are 3-4 feet wide. The raised bed system, as it is often called, is described in New to An Allotment
- Division of the plot into a small number of rectangular or square areas, either for convenience or for the purposes of crop rotation.

Needless to say, there are lots of variations on these themes.

Dig/No Dig

We have plot holders who span the divide on the subject of whether it is preferable to dig or not. Categories include:

- Digging single spit (one spade deep) or double spit (two spades deep). Alternatively, half trenching (sometimes called bastard trenching) is a halfway house between single and double digging which involves digging down one spit and then putting a fork into the bottom of the trench and wiggling it about to loosen the soil further

down to prevent it from becoming compacted. Double digging and half trenching is typically only done periodically, perhaps every 3-4 years. The digging fraternity splits into autumn, winter and spring diggers although there is probably no significant advantage to doing it at any particular time. Winter digging is often recommended in books, as it allows big clumps of soil to be broken up by the winter weather. However, this advice applies to clay-based soils which we do not have. Some advocates of spring digging claim that winter digging leads to nutrients being washed out of the soil. The timing seems more a matter of convenience and temperament. Most people dig, and the majority of them go one spade deep. While the great majority dig with a spade, a small number of people use a rotovator although it is necessary to remove any pernicious perennial weeds first to avoid simply helping them to multiply by chopping them up

- Forking the top 10-15cm to remove weeds and incorporate any manure or compost, usually in the early spring
- And finally, limiting the work to simply hoeing the top 5-7cm to remove weeds, again in early spring, and applying any manure or compost. The no dig approach is normally associated with the use of raised beds. The no-dig-vegetablegarden web site is a fairly comprehensive site on the topic, while a useful introductory leaflet was produced by the HDRA.

Some plot holders who wait until early spring will cover the ground with Builder's black plastic (or old carpets) over the winter period to kill off the weeds and thus ease the preparation in the spring.

Crop Rotation

Everybody rotates crops to avoid exhausting the soil of particular nutrients and the build up of diseases. The main exception is that some grow Runner Beans and Climbing French Beans in the same place. Rotation can be classified as either formal or informal:

- **Formal** signifies that the plot is split into 3, 4 or 5 areas of equal size and the classic rotation method, which is described in all the books (or in this RHS article), is employed so that a given crop (or members of the same family) do not occupy the same land for 3, 4 or 5 years, depending on the precise rotation method being use. The methods (there are several variations) are strict in defining what family of crops follows on from another family, e.g. Hessayon in The Vegetable and Herb Expert recommends that root crops follow brassicas on a 3 year rotation
- **Informal** means that some growers find the idea of splitting the plot into areas of equal size too constricting. They will simply ensure that (say) root crops will not be grown on the same piece of ground in the following years. This approach does not follow the strict rotation that is mentioned before, e.g. root crops may follow on

from a bed that had leeks and spinach on it rather than brassicas. However, it does follow the spirit of crop rotation, e.g. kale would not follow Brussels Sprouts as they are both brassicas. It pays to keep a record of the crops that reside on each bed in each growing season to avoid transgressing the rotation principle.

Making Compost

Most plot holders recycle left-over organic matter from crops, composting them to provide a necessary means of improving soil structure. Wooden structures (compost bins) are often (though not always) used to hold the material and to assist in retaining the heat. Pieces of carpet are often used to form a lid, not only to retain the heat but also to stop the heap becoming soggy in wet periods. Plastic ("Dalek") compost bins have become popular in recent years. Approaches to compost making include:

- One season cycle, i.e. doing it by the book. There is at least one person on our site who uses this method. It is not straightforward despite what the books may say. It requires a lot of compostable material in a relatively short period of time – the addition of kitchen waste and some grass cuttings may help. More importantly, sufficient heat must be generated to kill off weed seeds and the like. The incorporation of periodic layers of manure will help. In addition, several types of chemical compost accelerator products are available in garden centres although there is a homemade product that can be used, albeit one that should possibly not be mentioned in polite company – your own urine! A more acceptable product may be comfrey
- Several plot holders adopt a more pragmatic two year cycle where the rotting process is much slower: a heap is built for one year, and then it is left to rot for another year. This approach obviously requires two bins to provide an annual supply of compost. Care is required to avoid putting diseased material on the heap, e.g. blight-affected tomato haulms, as the relative low levels of heat are unlikely to kill off all potential problems
- Single heap – semi-composted. This refers to the situation where a single heap has only partially composted in the season. One solution is to take off the top un-composted layer, remove and use the composted material underneath, and then put the un-composted material back to form the base of a new heap. One plot holder simply places all the material (composted and uncomposted) in bean trenches for the following season.

Useful articles on compost making include: gardenadvice.co.uk article and (although they are also trying to sell you compost bins) a very good article in compostguide.com.

Uses for Spent Coffee Grounds

Several companies are giving away spent coffee grounds, notably Starbucks. An obvious use is to add it to a compost heap, mixing it well in with other material. Many people are also recommending it as a means of killing slugs. While a couple of us are trying this out in a small way there seems to be little concrete evidence that it is an effective treatment. One of the more restrained articles that I have seen on the subject can be found here. Apart from the efficacy of this approach there appears to be concerns about a decrease in aeration, leading to possible fungal disease, if it is spread too thickly on the soil; and a possible build up of chemicals in the soil.

Manures & Fertilisers

A number of plot holders get manure delivered from Broomhall Farm, which is adjacent to the site; it contains a mix of cow and horse manure. A problem occurred in many places across the country in 2008 when a herbicide called aminopyralid was found to contaminate manure, leading to the distorted and stunted growth of a variety of crops. Green Lane Allotments has an excellent account of the unfolding story. In theory, the problem has gone away but there are some plot holders across the country who claim that they are still suffering. The bottom line is to try to ensure that any manure which you obtain does not contain the dreaded aminopyralid. You could ask the provider if they have used any herbicides that contain aminopyralid. To my knowledge only one person at Sunningdale was unfortunate enough to get contaminated manure. Manure from Broomhall Farm has not been contaminated.

Some individuals make use of manure in pelleted form, e.g. chicken. One plot holder uses 6x in lieu of manure.

With respect to balanced fertilisers, there is a split between plot holders who use chemical-based fertilisers, e.g. Growmore, and those who opt for organic, e.g. Blood, Fish and Bone. Bonemeal is used as a slow release nitrogen fertiliser, particularly when fruit bushes or any other perennials are planted while potash requirements (mainly for fruiting) are catered for by Sulphate of Potash (chemical), proprietary products such as Tomorite, other liquid feeds, or comfrey leaves.

Green Manuring

Green Manuring is an alternative to animal manuring and may appeal to those who are concerned with the possibility of chemicals in the manure. It has been tried by several people for a season or two, although I am not aware of anybody on our site who has stuck with it. Winter is the most popular time to do it. Seed such as Italian Ryegrass, Winter Tares or Winter Field Beans is sown in the autumn while the soil is still warm. The crop fixes nutrients, e.g. nitrogen, thus preventing them from being washed out by winter rains. The crop is dug in during the spring. Summer crops such as Buckwheat and Fennugreek can be grown, but this obviously puts that area of the plot out of commission for the growing season, or at least part of it.

HDRA have an excellent document on green manuring.

Comfrey is a perennial which has a number of uses on the allotment. The initial growth in the spring is cut down to within 6 inches of the ground, usually with a pair of shears. Established plants may provide 3 cuttings a season. The leaves can be put under potatoes when they are planted, or they can be used as a mulch on tomatoes and fruit bushes. Alternatively, they can be used to make a liquid feed (see Garden Recipes) that can be used on tomatoes and beans. This article is useful, mentioning its herbal properties.

Liming

As a crude generalisation, sandy soil (which we have at Sunningdale) tends to need less lime than clay or loam soils to counteract acidity. Irrespective of soil type the recommended approach is to use a soil testing kit to check if your particular soil is acidic enough to need lime; soil with a ph of 6.5 or greater should not be limed. Lime is best applied in early winter but not at the same time as applying any organic matter or fertilisers (as ammonia may be produced resulting in damage to young growth). The RHS has a very useful article on liming.

Spraying / Companion Planting / Other Organic Methods of Pest Control

Some plot holders will spray with chemicals, albeit only as a last resort. The main purpose of spraying tends to be to control aphid and caterpillar attacks. Many familiar chemical products have been removed in recent years. Contact insecticide is the type which many people use in preference to systemic insecticides, as the latter are taken up and retained by the plant for a period of time. New systemic insecticides include Bug Killer and BugClear but they are very limited in the range of fruit and vegetables that they can be used on. Natural (chemical-free) products are beginning to appear although none have been proven to be effective so far.

There are a number of web sites which contain useful information on pesticides:

- pesticides.gov.uk includes a home garden page which allows you access to a database to find out if a pesticide is still legal or not
- https://www.gov.uk/hazardous-waste-disposal tells you what facilities your council offers to safely get rid of unused pesticides.

An alternative to spraying is to use companion planting. The idea is that a plant that is in close proximity to a given crop can aid it either by emitting a smell that repels pests or by attracting insects that will feed on the pests. The planting of French Marigolds close to beans to control black fly is arguably the best known idea, and one that is used by a number of plot holders. Some say that it is an effective method of control while others have had little success with it. The Poached Egg plant flowers over a long period, attracting hoverflies and ladybirds which will both eat aphids. It is self-seeding. One plot holder plants carrots with onions, summer savory with beans, marigolds and nasturtiums with tomatoes, and sweet peas with beans. Here is a useful article on the subject. In addition, there are a number of

tables which can be found on the Internet that show the "compatibility" between plants: try this one for starters.

Some plot holders will not spray, preferring organic methods. There are several useful websites on organic pest control, including AboutOrganics and GardenAdvice web sites.

Slug Control is included in each of these articles, but there is a slug-specific section on the RSPB web site and this article is also useful.

Possible natural deterrents against rats which we have had some trouble with lately include catmint and rhubarb leaves.

It should be pointed out that many plot holders are pragmatic and will use a range of techniques, chemical spraying, organic methods and companion planting, as appropriate.

One general trend is to use products such as Tumbleweed to remove troublesome perennial weeds such as ground elder and bind weed, albeit in adjacent areas such as paths rather than in the middle of cultivated areas.

Physical barriers can be very effective against some pests: enviromesh, a very fine net which is used by a couple of plot holders, can keep pea moth, cabbage fly and carrot fly at bay; while any barrier that is a couple of feet high will deter the low-flying carrot fly. An alternative to enviromesh which is becoming quite popular among plot holders across the country is debris netting (as used by builders), probably because it is relatively cheap.

Combating Wildlife

This section can also be found in the New to an Allotment page. Wildlife problems will vary depending on the location. Our site at Sunningdale is adjacent to farm land and hence we tend to a varied selection of fauna who think of us as a free supermarket! Our neighbours include:

- **Deer.** They are becoming an increasing menace after many years of very spasmodic visits.They love anything that is young, sweet and succulent. Examples include: the hearts of lettuce, raspberries, spinach, chard, the young shoots of peas / mangetout and beans plus tomato flowers. If they cannot be kept out of the site consider physical barriers such as chicken wire (e.g. bent over a row of lettuce) or plastic netting with a small mesh size. Old CDs strung together and hung around the periphery of a crop can help to keep them at bay (also acts as a bird deterrent). Several recipes for deer repellent sprays can be found on the Internet. They are generally based on the use of eggs although they may be better deployed in keeping deer off ornamental plants rather than food. This recipe was located by a Sunningdale plot holder. Other techniques, including the use of lion dung!!, human hair and sonic deterrents which are discussed here on the British Deer Society web site.

- **Badgers.** They are mainly a problem in dry weather when worms, part of their staple diet, retreat down into the soil, and therefore they are attracted by any moist area where worms may be closer to the surface. They particularly like sweet corn, and will happily knock plants down before gorging themselves on the cobs. They also appear to like carrots. If they are grown in a square patch and surrounded with a barrier of (say) corrugated plastic to minimise damage caused by the carrot fly, it will probably also deter the badger. While they could easily destroy the barrier if they set their minds to it, they tend to go looking for easier pickings.
- **Birds.** Pigeons, parakeets and the occasional pheasant cause the most damage, particularly to brassica crops, and in recent years pigeons have also become attracted to peas and mangetout shoots. Birds will also go for most soft fruit. Netting is the most frequently used deterrent. Alternatives that are employed include: a scarecrow; iridescent tape (with a holographic surface) that flashes and reflects light plus it moves and rattles in any light breeze; or streamers made of old video tape.
- **Rabbits** have occasionally been sited. They too like young shoots, typically seedlings or small plants. Again, use chicken wire or netting.
- **Squirrels** have a particular liking for strawberries. Once again, a physical barrier, e.g. chicken wire, will be required. They also like sweet corn, as do parakeets, so they need to be netted.
- **Field mice** are attracted to large seeds, e.g. pea and bean, particularly in the early spring. An old-fashioned remedy is to rinse the seeds in paraffin prior to sowing, or alternatively to spray the surface with paraffin after sowing and soil levelling. Another approach is to put fleece over the area where the seeds have been sown and to leave it in place until the plants are 2-3 inches high. Apart from keeping pigeons off the seedlings it will make life more difficult for the mice.

Soil-Borne Problems

Onion white rot and club root are soil-borne diseases which some plot holders on our site, but by no means all, suffer from. Onion white rot leads to the rotting of the roots and the underside of the bulb. Club root leads to a small number of swollen roots on brassicas which severely affect the growth of the plant.

General soil problems, e.g. a lack of trace elements, tend to be less common in outdoor cultivation. They more typically affect container-grown plants. However, if you think that you may have a trace element deficiency see this page (scroll down it to find some useful pictures of specific deficiencies).

Seeds

Saving the seed from members of the pea and bean family is a fairly common practice among plot holders. Replanting garlic cloves from bulbs that have been harvested the

previous season has been done. One plot holder also saves tomato, squash, pumpkin and sunflower seed, while another used to save garlic seed. The Real Seed Company, which specialises in providing old, unusual and non-UK varieties, has a useful 5 page guide to seed saving that can be downloaded.

TheSeedSite is an excellent source of general information on harvesting and using seeds although the detail concentrates mainly on flowers and herbs.

There is a tendency among all gardeners to keep seeds too long, especially now that they are relatively expensive. Of course, it is often difficult to remember when a given packet was bought, given the sneaky tendency of many seed companies to put the date at the top of the packet, which promptly gets torn off and thrown away when it is opened. Here is one chart that shows seed viability, and here is another.

Here is an example of disease-resistant varieties by crop although disease resistance is sometimes ignored by growers in favour of flavour.

Finally, it is worth mentioning that there are various seed movements across the world whose objectives are to try to ensure that old crop varieties are not allowed to die out. In the UK the main organisation is the Heritage Seed Library (HSL). Members receive a copy of the current catalogue annually and can choose up to 6 varieties of their choice. There is also an informal swap facility between members. Some members volunteer to act as "seed guardians", helping to produce seed to keep varieties going.

Moisture Retention

The first basic rule is that any ground that has good levels of humus incorporated, e.g. homemade compost or well-rotted manure, will retain moisture longer than ground that has not been so enriched.

Some specific ideas for retaining moisture include:

- It is possible to have moisture problems early in the season. 2007 saw a predominantly dry March after a very wet winter. Some areas of the plot started to dry out in the top inch or two, just where moisture was required for the germination of any directly sown seed – I had to water the seed drill in late March before sowing spinach on one bed that is prone to be dry. One technique that can be used to slow down the rate of loss of surface moisture during dry spells is to put white horticultural fleece down on the bed while it is still moist. It stops the effect of the drying winds at this time of year and it lessens the impact of the sun. Leave the fleece in place until after germination has occurred, preferably until the seedlings are an inch or two high
- Lining bean trenches with several layers of newspaper before adding compost or manure will help to retain moisture

- Surface mulches consisting of items such as leaf mould or grass clippings around plants will help to preserve moisture. Once again, put the mulch down while the soil is still moist or thoroughly wet the area first
- The ground cover material that can be bought in garden centres, the type which lets water through, can help to reduce evaporation, as well as its primary purpose of keeping the weeds down. It is often used on strawberry beds where it also helps to keep the fruit clean. One plot holder successfully uses it with courgettes, squashes and tomatoes while another uses it in a fairly wholesale manner across her plot to keep weeds down and to avoid any watering apart from the initial week or so after any transplanting
- Several plot holders sink 4-5 inch plant pots into the soil next to fruiting vegetables, e.g. tomato, courgette, squash, cucumber, pepper (sweet and chilli) and aubergine. Watering into the pot ensures that the water goes exactly where it is required and any run-off is avoided. Some plot holders use inverted plastic bottles with the bottoms cut off instead of pots.

There are various crops that seem to cope better in dry conditions once they are established. They include: courgettes, squashes, pumpkins and chilli peppers.

Growing in Partial Shade

Some plots on the site are partially shaded, typically by oak trees along the southern boundary. The result for these plots is shade early in the day and sunshine in the afternoon and early evening.

Germination can be less effective on shady plots, particularly in seasons when the overall conditions are generally unfavourable, e.g. in a wet spring. Where possible start crops at home so that plants have established root systems when they are eventually put out on the plot. Alternatively, try to improve the conditions for directly sown crops by using raised beds if the plot is prone to be wet and/or by protecting them with fleece, cloche or similar until they get established.

In terms of crops that can be grown:

- fruit that often grows around woodland edges in the wild will obviously do well, e.g. blackberries, raspberries, currants, gooseberries and rhubarb
- any leafy vegetable will usually grow satisfactorily, e.g. spinach, lettuce and brassicas
- potatoes and squashes will grow reasonably
- herbs – chervil actually prefers semi-shade. Chives, tarragon, mint and parsley will tolerate partial shade.

The bottom line is really to try anything that you want to grow and find out through your own experience which crops perform satisfactorily.

Late Sowing for Autumn / Winter Crops

Here is some useful information on late sowing for autumn / winter crops. The standard advice for the appropriate crops is to sow up to July (or possibly August) for a mid-autumn or early winter crop, choosing a quick growing variety, e.g. short-stumped carrots, and / or one that is resistant to mildew or other fungal diseases that tend to proliferate later in the season, e.g. Avondefiance or Winter Marvel lettuce. It is also usually recommended that cloches are put over the crop from September onwards although good air circulation is important.

The relative success of late sowing will ultimately also depend on how vigilant you are in monitoring the progress of the crop and spotting any problems, i.e. if you have little time available then it may prove difficult to produce crops.

Sowing / Planting by the Moon

Lunar-based cultivation is one of those approaches that a small number of individuals swear by, some are not so sure but adopt the method to some degree anyway, while others think that it is largely “mumbo-jumbo”. As far as I can tell Sunningdale plot-holders generally fit this pattern.

Gardening by the Moon is a web site that explains the phases of the moon and what should be planted when.

The Gardener’s Calendar.co.uk web site includes details for planting over the next 7 days. Scroll down the home page to see the Moon Planting Guide.

Page last updated on September 13th, 2019.