

## Crop rotation

Crop rotation is the practice of planting vegetable crops in different parts of the plot each year. This prevents the build-up of soil-borne pests & diseases associated with certain plants, and also spreads the demands that heavy-feeding plants make of the soil.

Generally, the demands and susceptibilities of vegetables within families are similar, so knowing these families is a useful starting point.

### PLANT FAMILIES

These are the families of commonly-grown allotment crops. Varieties shown in italics aren't particularly susceptible to soil-borne disease and so can safely be planted in the same soil for several years:

- Alliaceae - chive, garlic, leek, onion, shallot
- Amaranthaceae - amaranth, beetroot, chard, quinoa, spinach
- Apiaceae - carrot, celeriac, celery, coriander, dill, *fennel*, parsnip, parsley
- Asteraceae - *chicory*, *endive*, *globe and Jerusalem artichoke*, lettuce, sunflower, tarragon
- Brassicaceae - broccoli, cabbage, calabrese, cauliflower, kale, landcress, radish, rocket, swede, turnip
- Cucurbitaceae - *courgette*, cucumber, *marrow*, melon, *pumpkin*, squashes
- Fabaceae - broad bean, *French bean*, pea, *runner bean*
- Poaceae - *sweetcorn*
- Solanaceae - *aubergine*, *capsicum*, potato, tomato

Five families (Alliaceae, Apiaceae, Brassicaceae, Fabaceae, Solanaceae) are in widespread use and susceptible to soil-borne disease, making crop rotation a sensible precaution.

### CROP ROTATION

Any arrangement which ensures that members of the same plant family don't use the same ground two years running is useful, but some diseases survive longer and the longer the cycle the better. The nitrogen requirement of different crops is a further consideration. Here is a typical five-year rotation plan:

Year one: Brassicaceae require plenty of nitrogen so the starting point is a well-fed bed manured some months before planting out. They also like a higher pH (more alkaline) soil, so lime is often added shortly before planting (but not with the manure).

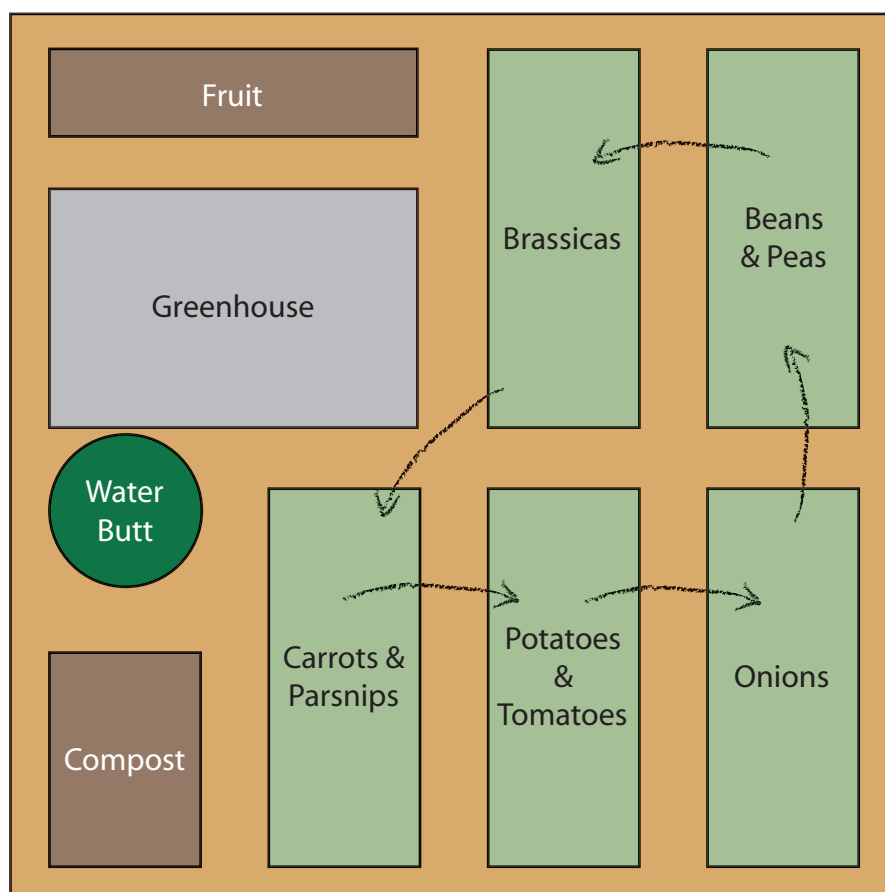
Year two: Fabaceae grow happily in the nitrogen-depleted soil in which brassicas grew last year. They fix atmospheric nitrogen which, if their roots are left in the ground, improves the soil for the following year.

Year three: Alliaceae are not heavy feeders, and grow well in the soil improved by last year's bean crop with little extra feeding.

Year four: Feed the soil in winter, then plant Solanaceae, which are heavy feeders. (They dislike lime, which is why they are placed several years after brassicas.) The roots and tubers break up the soil, which is useful for their successors.

Year five: Apiaceae need stone-free, well-prepared soil which is not recently manured. Following potatoes, the soil will be well dug and won't have an excess of nitrogen.

In practice, different amounts of land are required for each family, unlike the tidy example below. Crops which don't require a particular place in the cycle (for example, courgettes and runner beans) can be used to fill in spare space in the beds.



An example allotment plan showing a five-year crop rotation.