

GROW YOUR OWN FOOD

Before you get started on growing your own fruit and veg, there are a few things you need to consider:

- What is my soil like?
- What can I do to improve the soil?
- How much light/shade is there?
*(NOTE: Lettuce, rocket, spinach don't mind shady spots.
Beetroot, coriander, rhubarb, mint, turnips are ok in partial shade).*
- Try to maximise the light.
- Is my plot/tunnel in a windy spot?
NOTE: Polytunnels can provide shelter but need to be securely fixed!
- What do you want to grow?
What do you like to eat? Do you want to grow herbs and flowers?

WHERE WILL YOU GROW?

Common options for growing fruit and veg are:

Raised Beds:

Narrow beds about 1.25m wide with a path around each side.

Advantages:

- Easier to manage.
- Can reach into the middle without walking on the soil
- Higher yields because you can grow things more closely together.
- Easier to weed
- Simpler to keep on track of rotation

- Good for poor soils because it is easier to focus improvement efforts and import soil or add organic matter.
- Soil tends to be lighter and more compact so warms up more quickly
- Easier to protect crops if necessary.

Polytunnels:

Positives:

- Some of the more tender summer crops to be grown such as tomatoes, chillies, climbing French beans.
- Allows the seasons to be extended slightly.
- Gives some protection against frost.

Warnings:

- Plants will need more watering
- Snow needs to be cleared quickly to prevent damage

MAINTENANCE – KEY FACTORS

1. Soil fertility
2. Crop protection
3. Weed control
4. Watering

Consider each carefully as it can affect the crops that you grow. Do consider how much spare time you have to devote to your crops – some require more attention than others.

SOWING SEEDS

- To germinate, seeds need: suitable temperature, air, sufficient moisture, suitable light levels.
 - Germination takes place at different temperatures for different seeds.
 - As a rule of thumb cover seeds to approximately twice their depth.
 - The seed has to take in water, but you need to ensure the conditions are not too wet or too dry! Too much water stops the plant from taking in air(oxygen).
- When sowing seeds ensure the temperature is at least 7°C.
- Don't walk on the soil – if you need to stand on the soil use a plank of wood to spread the weight.
- Sow small seed thinly or place larger seed individually at pre-determined spaces.
- Water thoroughly with a fine watering can.
- **Do not sow in cold wet soil as germination will be poor.**

Sowing direct into beds:

- Thin when necessary to the correct spacing to allow plants to grow. Overcrowded plants will be thin and leggy.
- Water after thinning to settle the soil back.

Sowing seed in pots/trays

Suited to plants that

- do not like their roots being disturbed (e.g. beans). These are better grown in modules.
- Tender plants that like more warmth for germination (e.g. tomatoes and peppers)
- Are suited to being transplanted (e.g. brassicas)

Apart from any seeds grown in deep modules, when seedlings have two true leaves pot them on into a larger container filled with compost. Use a dibber/pencil to make a hole. Lift the seedling by the seed leaves. Gently fill the hole with compost and water with a fine spray. Return to the same environment as you were growing them before. Some plants will need to be potted on again – or planted out.

Hardening Off - plants that have been grown indoors or in polytunnels but are to be planted outside in beds will need to be 'hardened off'. Simply place them in a sheltered spot for a couple of hours during the day and return them or cover. Gradually increase the exposure.

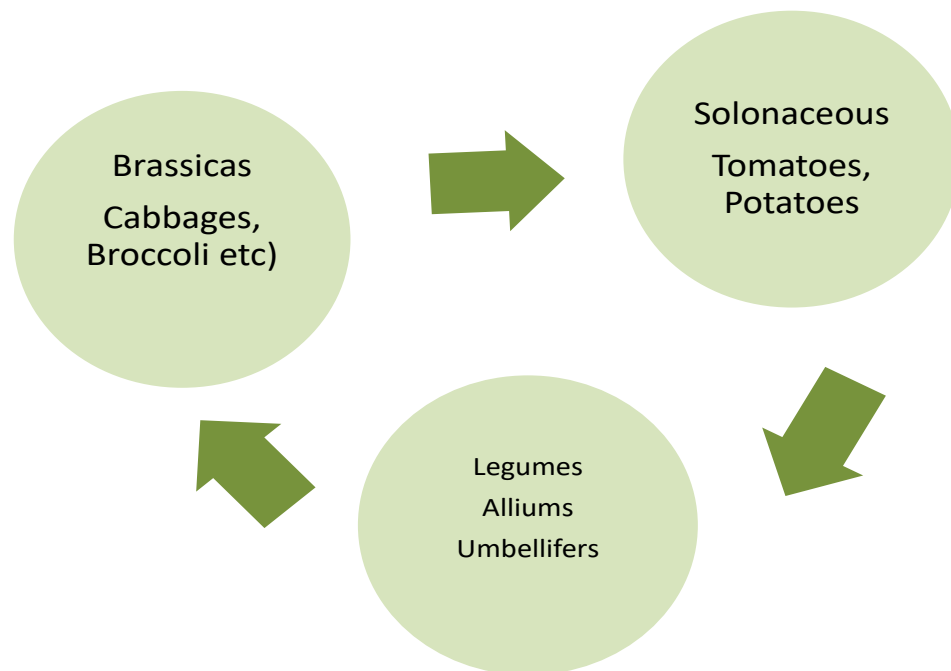
Planting out

- Ensure soil is prepared and weeds removed.
- Mark where you want the plants to go and dig a hole slightly larger than the pot
- Gently remove the plant from the pot and place in the hole
- Firm the soil with your hands and water.

CROP ROTATION

Crop rotation is important. It can help avoid the spread of disease within your crops and help maintain a healthy plot. Brassicas are susceptible to club root if grown in the same bed year after year. It doesn't really matter how big or small your beds are – the principal is the same.

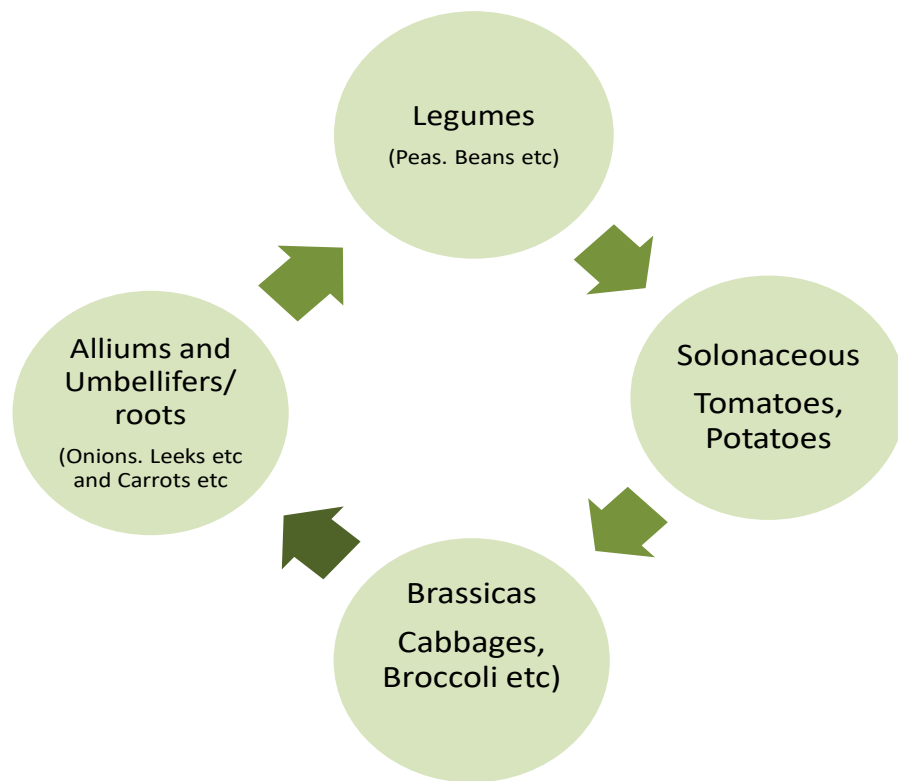
3-year crop rotation



Crop Rotation examples

- The root nodules of Legumes (peas, beans) can help fix nitrogen, so dig them into the soil once you have harvested your crop.
- Brassicas are nitrogen hungry so ideally should be planted in the bed that previously contained legumes.
- Umbellifers (carrots, parsnips parsley etc) don't mind if nutrients are relatively scarce, so can follow brassicas.
- Alliums (onions, leeks) do well on poor soil especially if sandy.

4-year crop rotation



The crop rotation you decide on obviously depends on how many beds you have – you should aim to have at least three.

GROWING TIME

Different vegetables need different lengths of time to reach maturity. In the meantime

- Water
- Weed
- Prevent Overcrowding
- Protect if necessary
- Support – beans, peas, tomatoes etc

HARVEST TIME

Pick crops in peak condition – **don't hang on!**

COMMON VEGETABLES

		Soil temp For sowing seed	Time to germination	PH notes
Legumes	Broad Beans	6°C	7-14 days	6.5 - 7.0
Legumes	French beans	13°C	7-14 days	6.5 - 7.0
Legumes	Peas	6°C	7-10 days	

Brassicas	Broccoli	8°C	7-12 days	6.8 +
Brassicas	Cabbage	8°C	7-12 days	6.8 +
Brassicas	Calabrese	8°C	7-12 days	6.8 +
Brassicas	Cauliflower	8°C	7-12 days	6.8 +
Brassicas	Kale	10°C	7-12 days	6.8 +
Brassicas	Turnips	10°C	6-10 days	6.8 +

Solonaceous	Peppers - Chilli	18-21°C	14-21 days	
Solonaceous	Potatoes: 1st Earlies	7°C		5.0 - 6.0
Solonaceous	Potatoes: First earlies	7°C		5.0 - 6.0
Solonaceous	Potatoes: Maincrop	7°C		5.0 - 6.0
Solonaceous	Tomato	18-21°C	8-11 days	

Umbellifers	Carrot	8°C	17 days	6.5 - 7.0
Umbellifers	Parsnips	10°C	10-28 days	6.5

Alliums	Leeks	10°C	14-18 days	6.5 +
Alliums	Onions -	10°C	11-14 days	6.5 +

Other	Beetroot	8°C	10-14 days	
Other	Courgettes	18-20°C	5-8 days	
Other	Cucumber	18-20°C	4-9 days	
Other	Salads	(5°C)10-20	6-12 days	
Other	Spinach	7°C	12-20 days	
Other	Squash/Squash	18°C	5-8 days	
Other	Sweetcorn	20°C	10-12 days	

POTATOES

- Potatoes are split into three main groups: early, second early and maincrops.
- Early potatoes need slightly less space to grow and can be lifted (dug up) earlier in the year.

Chit

- Chitting means getting the seed potatoes to sprout before planting out.
- Start chitting in February about six weeks before you intend to plant.
- Stand the tubers with the blunt end uppermost in trays or old egg boxes, with plenty of natural light.
- They are ready to be planted when the shoots are between 1.5-2.5cm long.

Plant

- Plant the potatoes when the soil has begun to warm up, about the end-March or early April. Dig a trench 7.5-13cm (3-5in) deep, although the exact depth should vary according to the variety of potato you are planting.
- Plant early potatoes about 30cm (12in) apart with 40-50cm (16-20in) between the rows, and second earlies and maincrops about 38cm (15in) apart with 75cm (30in) between the rows.
- Handle chitted tubers with care, setting them into the trench with the shoots pointing upwards, being careful not to break the shoots. Cover the potatoes lightly with soil.
- As soon as the shoots appear, earth up each plant by covering it with a ridge of soil so that the shoots are just buried.
- You need to do this at regular intervals and by the end of the season each plant will have a small mound around it about 15cm (6in) high.

Harvest

- Potatoes should be ready for lifting from June until September, depending on the varieties and the growing conditions. Earlies can be lifted and eaten as soon as they're ready. This will be when above-ground growth is still green, and usually as soon as the flowers open.
- Second and maincrop varieties can be kept in the ground much longer, until September, even though above-ground growth may well be looking past its best.
- Two weeks before you lift the crop, cut the growth off at ground level. This should give the skins of the potatoes sufficient time to toughen up, making them far less prone to damage from lifting and easier to store.

LEGUMES

Broad Beans

- Sow 2" deep in double rows 8" apart and 8" wide; 18" between double rows.
- Can be grown in pots in Feb/March and planted out later.
- Germination 7-14 days.
- Can be planted in autumn for early sowing but this can be a bit of a gamble.
- Provide support (e.g. 4' post at the end of each row and run 2 horizontal strings 12" and 24")
- Pinch out the top 3" when the first beans appear
- Time to maturity 14 weeks if planted in spring; 26 weeks if planted in autumn.
- Beans mature in succession so pick from the bottom up.

French/Dwarf Beans

- Sow mid Spring to summer. (July sowings in polytunnel – not outside) 2" deep.
- Soil needs to be at least 12°C. Good to start indoors.
- Germination 7-14 days.
- Sensitive to frost.
- 6" apart; 10" between rows.
- Good for succession sowing (2/3 weeks apart.)
- Water sparingly when young but generously when established.
- Harvest 8- 12 weeks.

Runner Beans

- Sow mid-April at the earliest. 2" deep. Sow June for a late crop which may be possible in polytunnel.
- Soil needs to be approx 12C. Good to start indoors
- Sensitive to frost
- Germination 7-14 days
- 6"-9" apart; 10" (Double rows 24" apart)
- Water well in dry weather.
- Harvest 12-14 weeks.
- Need to pick beans every couple of days.

Peas

- Germination 7-10 days
- Succession sowings. (Late March/Early April; Mid April/early June; end June/Mid July)
- Autumn/winter sowings are a bit of a gamble.
- Sow 2" deep, 3" between seeds in flat drills
- Best quality peas are wrinkled but are not as robust as round
- Allow 18" between rows
- Do not like high temperatures
- Harvest in 12- 16 weeks

Brassicas

Broccoli & Calabrese

- Sow April – mid-summer
- Germination 7-12 days
- Soil temperature 8°C
- Sow $\frac{3}{4}$ " deep thin to 3" apart; final spacing 18"-24" apart)
- Ensure ground is firm
- Check plants at least twice a week to ensure stems do not go to seed.
- Harvest before small flower buds open as become woody and tasteless
- Succession sowing = 3 weeks
- May not transplant well in warm weather

Cabbage

- Sow Summer/Autumn cabbage in mid spring to mid-summer
- Sow Winter cabbage late spring to early summer
- Sow in seed bed or modules
- Germination 7-12 days
- Soil temperature 8°C
- Sow $\frac{1}{2}$ " deep; transplant at 6 leaf stage; final spacing 18" apart (compact plants 12")
- Keep seedlings and transplants well watered.
- Ensure ground is firm

Cauliflower

- Germination 7-12 days
- Soil temperature min 8°C
- Summer sowing varieties mature mid- spring
- Sow $\frac{1}{2}$ " – $\frac{3}{4}$ " deep in seed bed or modules; final spacing 24" apart
- Transplant when 3-4" tall
- Ensure ground is firm
- Time to maturity 18-24 weeks

Kale

- Soil temperature for germination 10°C
- Germination 7-12 days
- Sow $\frac{1}{2}$ " - $\frac{3}{4}$ " in seed bed or modules
- Transplant when 4"-6" high approx. 6-8 weeks after sowing to 24" between plants
- Can be picked young as salad leaves
- Harvest from the crown of the plant.

Turnips (are a fast-growing brassica but are grown for their roots; suitable for intercropping)

- Germination 6-10 days
- Sow thinly $\frac{1}{2}$ " – $\frac{3}{4}$ " deep (March; August - September)
- 8" between rows
- Thin when big enough to handle. 1" apart for baby veg. 2" for normal size.
- Start pulling them when almost 1" across.
- Succession sowing every 3-4 weeks
- 6-12 weeks to mature

Alliums

Leeks

- Sow in mid to late winter in modules at 10°C. $\frac{1}{2}$ " deep
- Germination 14-18 days
- When seedlings are 8" tall transplant to final position
- Make 4"- 6" hole and water in transplanted seedling
- Time to lifting 30-45 weeks
- For continuous supply make several sowings

Onions

- Onion sets at 10C in March/April (ready August to early September)
- Overwintering onion sets September/October (ready May – July)
- 4" apart 8" between rows
- Time to lifting 20 weeks

Umbellifers

Carrots

- Sow in thin drills $\frac{1}{2}$ " – $\frac{3}{4}$ " deep
- March April and July-August (use early varieties)
- Germination 17 days
- 6" between rows.
- Sow (undercover) in early spring 8°C
- Prefers cool climate so early and later sowings more suited to polytunnel growing.
- Pull alternate seedlings to thin as required
- Time to maturity 12-16 weeks
- Succession sowing

Parsnips

- Sow at 10°C mid – late spring
- Sow thinly ½” deep
- 6” between seeds, 12” between rows
- Germination 14 -28 days
- Time to lifting 34 weeks (Dig up when foliage starts to turn yellow)

Other

Beetroot

- Sow 1” deep 4” apart and 12” between rows when soil 8°C (early spring).
- Can be started in modules. Plant module grown seedling when 2” high about 8” apart.
- Germination 5-14 days
- Thin to 3” apart
- Protect early sowings as can go to seed if sown too early or conditions are too cold
- Start pulling when big enough to use (even as small as 1”)
- All parts are edible. Young leaves good for salad leaves
- Ready to harvest 9-13 weeks
- Succession sowing every 2 weeks

Courgettes

- Sow with heat in small pots. Soil temperature 20°C (April) may still need to cover early sowing with fleece
- Germination 5-8 days
- Plant 24” apart (minimum)
- Keep soil moist increase water as plants grow.
- Pick courgettes as soon as big enough to use
- Time to cutting first fruit = 10-14 weeks

Lettuce

- Sow ½” deep
- Salad leaves 6” between rows
- Mini lettuces 9” between rows
- Butterhead lettuces 12” between rows
- If growing as lettuce thin as first true leaves appear
- Sow short rows at 2-week intervals (when seedlings from previous sowing appear)
- Can be transplanted but dislike root disturbance
- Time between sowing and being ready = 6-8 weeks

Spinach

- Sow $\frac{3}{4}$ "-1" deep at 7°C
- Fast growing cool weather annual so early or late sowings.
- 12" between rows
- Succession sowing every 3 weeks
- Start picking as soon as the leaves have reached a reasonable size. Pick outer leaves first.
- Good as salad leaves
- Approx. time to picking 8-14 weeks