

Feeding and watering vegetables

GWF422
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It goes without saying that vegetables need nutrients and water to produce good crops - but perhaps they don't need quite as much as you'd think.

Q How much fertiliser do I need to use?

A You can approach this question in two ways. How much do I need to use to produce the best crop, or how little can I get away with? On environmental grounds, we suggest the latter.

Most garden soils contain plenty of nutrients and organic matter, compared with agricultural land. The quantities suggested in the table overleaf are based on the total amount of fertiliser needed to see each vegetable through to harvest. If your soil is reasonably fertile, you can halve this amount.

If you add reasonable amounts of garden compost or well-rotted manure each year, you can reduce the amount of fertiliser that you apply even further.

Organic gardeners would argue that once your soil is in good condition, you shouldn't need to add concentrated fertilisers. As a halfway house, substitute organic fertilisers for the growmore if you plan to grow organically.

Q Which type of fertiliser should I use?

A In the table, we assume that you will add a balanced fertiliser - one containing equal amounts of the three major plant nutrients, nitrogen (N), phosphate (P) and potash (K) - such as growmore.

But P and K are retained within the soil, so if there is sufficient in your soil already, why add more? To find out, consider sending a sample of soil to be tested. Contact us for more information on our Soil Analysis Services.

If there is plenty of P and K, you need only top up with N each season. Use a nitrogen fertiliser such as sulphate of ammonia, or nitrochalk (best on acid soils since it contains lime) for leafy crops.

Apply about half of the total amount of fertiliser, worked into the soil, before you sow or transplant vegetables. Apply the second half when the crop is about halfway to maturity.

Q Can I use manure or compost to feed my vegetables?

A Well-rotted farmyard or stable manure and well-made garden compost contain useful amounts of plant nutrients. Organic matter also helps to open up clay soils and retain moisture in free-draining, sandy soils.

If supplies are short, use them on the crops that are likely to gain most benefit; see table. Apply about a bucketful per sq m each year. Remember that each kilo of manure contributes about as much nitrogen as 25g of growmore. If you apply more and it is not used, it may pollute underground water in exactly the same way as artificial fertiliser.

Q Does crop rotation help to keep plants well fed?

A Aside from any benefits of pest and disease control, moving groups of vegetables around from year to year helps to ensure that nutrients are used efficiently. It also means that manure or compost can be applied to the crops that benefit most in the first year. Any residues will be used up by later crops

Q How much watering is needed if it's dry when I'm sowing veg?

A If it is dry at sowing time, water the seedbed thoroughly a day or two before sowing. Similarly, if the surface is dry when you plant out, water the pots thoroughly first and water the young plants in well. Thereafter don't water unless the soil becomes very dry.

To check, dig a hole the depth of a spade: only when the soil this deep starts to feel dry do you need to consider watering.

Q If there is a dry spell, what's the best policy?

A If the soil does start to become very dry, don't waste water. Give small areas a thorough soak every week. If you just wet the surface daily, this will encourage surface roots, which are more drought-susceptible.

Q If water is short, which vegetables need it the most?

A Concentrate on vegetables that will get the most benefit:

- ❖ Leafy vegetables and quick-growing salads (marked as needing water regularly in the table) should receive roughly 11 litres per sq m weekly. Adequate water encourages quick growth which is sweet, crisp and tender.
- ❖ Veg near harvest, such as peas and beans after pod set and

sweetcorn when cobs are forming, will benefit from 11 litres per sq m. Lack of water will lessen yield.

- ❖ Summer cabbage and cauliflowers and maincrop potatoes need just one good soaking a couple of weeks before harvest to boost the edible parts. Most root crops and winter vegetables should survive in most years without additional watering.

Ways to save watering

- ❖ Construct permanent beds and paths.

- ❖ Water the plants' roots, not the soil.
- ❖ Mulch beds with organic matter in early spring to reduce any evaporation.
- ❖ Plant large, widely spaced plants through a plastic mulch.
- ❖ Make a bean trench and fill it with the remains of previous crops, shredded newspaper, manure etc to retain moisture.
- ❖ Hoe regularly; a dry, loose surface helps prevent evaporation from deep down.

How much fertiliser? [1]	Benefits from manure?	Chalk, sand or poor soil	Clay, loam or well-manured soil	When to water[2]
Bean, broad	no	100g	50g	regularly, from start of pod set
Bean, French (dwarf)	no	180g	90g	regularly, from start of pod set
Bean, runner	yes	180g	100g	regularly
Beetroot	no	210g	140g	not usually necessary
Broccoli, sprouting	yes	210g	100g	not usually necessary
Brussels sprouts	yes	350g	180g	at transplanting
Cabbage, spring	no	210g	100g	not usually necessary
Cabbage, summer	yes	350g	180g	once, three weeks before harvesting
Cabbage, winter	yes	350g	180g	not usually necessary
Calabrese	yes	210g	100g	once, three weeks before harvesting
Carrot	no	35g	0	not usually necessary
Cauliflower, summer	yes	280g	140g	once, three weeks before harvesting
Cauliflower, winter	yes	280g	140g	not usually necessary
Celery, self-blanching	yes	210g	100g	regularly
Chinese cabbage	yes	280g	140g	regularly
Courgette/ marrow	yes	210g	100g	regularly, twice a week
Garlic	no	180g	90g	not usually necessary
Kale	yes	210g	100g	not usually necessary
Leek	no	210g	100g	regularly
Lettuce	yes	180g	90g	regularly
Onion	no	180g	90g	not usually necessary
Parsnip	no	35g	0	not usually necessary
Pea	yes	0	0	regularly, from start of pod set
Potato, early	yes	210g	100g	regularly
Potato, maincrop	yes	280g	140g	regularly, when tubers start to form (= when flowering)
Shallot	no	180g	90g	not usually necessary
Spinach	no	280g	140g	regularly
Squash	yes	210g	100g	not usually necessary
Swede	no	70g	35g	not usually necessary
Sweetcorn	no	140g	70g	regularly, when tassels appear and cobs start to swell
Tomato	yes	140g	70g	twice a week
Turnip	no	70g	35g	not usually necessary

[1] Figures based on g per sq m of growmore (7% N). To convert to nitrochalk or sulphate of ammonia (both 21% N) divide these amounts by three.

[2] For vegetables that need watering regularly, apply 11 litres per sq m each week in dry spells. This is equivalent to 2.5cm of rain.