

Homegrown Horticulture

TIPS FOR SUCCESS IN YOUR OWN BACKYARD

Fertilizing Vegetables

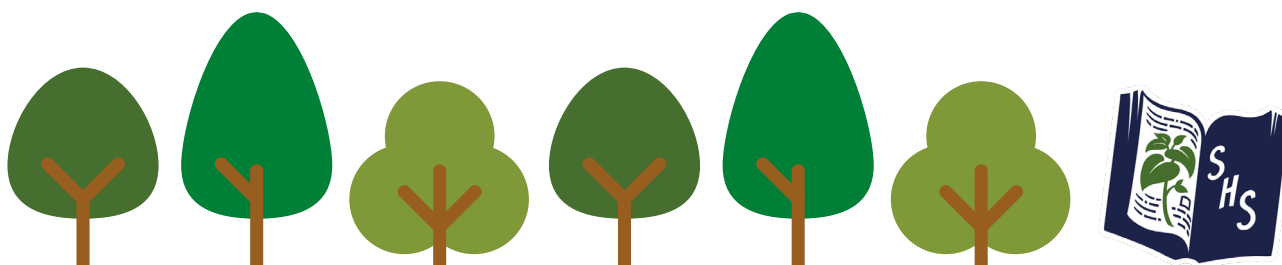
General guidelines

There are lots of ways to meet the nutrient needs of the vegetables that you grow. If you are growing in soil, whether in the ground, or in raised beds, the soil will supply most things, without too much effort. If you want to keep it simple, you can fertilize all vegetables the same (and minimally) and you should be fine most of the time. If you add a bit of composted manure into the soil each fall, you should be ok and avoid reaching a point of depletion.

If you want to fine tune your vegetable production, it is possible. If you notice recurring nutrient-related disorders, or consistently have crops that fall well short of the ideal or acceptable yields, then maybe you need to focus in on specifics. The complicating factor for growing vegetables is that all vegetables have different specific nutrient requirements. Also, in order to implement specific solutions, you need to know exactly what you have in your soil. If you want some general targets, see the page below.

As a general rule, when fertilizing, we focus on nitrogen (N), phosphorus (P), and potassium (K), as they have the most direct impact on the plants and are the elements that we apply most often. There are other required nutrients, but they are needed in very small amounts, and most of them will be supplied along with the major (macro) nutrients that we are already applying. To keep it very simple, nitrogen is usually associated with vegetative growth, helping the plant have the fuel it needs to put on size and biomass. Phosphorus is a critical component in making sure that a plant can get the energy from the sun, but is also a big part of root, flower, and seed development, as well as overall plant strength. Potassium is important in making sure that plants have the energy that they need and can move water, nutrients, and other compounds around the plant. Without potassium, plants can't grow properly, and are weaker and stunted.

Vegetables can be fertilized in a variety of ways. Since you usually grow a bunch of vegetables in the same space, you can just make sure that everything has enough. This can be done by adding a bit of organic matter (composted manure, etc.) to the soil each fall, or by broadcasting and incorporating a granular fertilizer over the whole space in the spring. If you find that things are getting a bit big or overly lush, skip a year. When fertilizing, don't get too carried away. A bag of fertilizer will go a long way to supplying the plant needs.





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Some vegetables will benefit from more fertilizer at some points during the growing season. For example, using a high P water-soluble fertilizer right as you put transplants in the ground can help give them a rooting boost. You can apply a bit of nitrogen fertilizer alongside the row of the crops that need more, such as corn, or some of the Cole crops (e.g., cabbage), usually 4-6 weeks after plants first emerge. This mid-summer boost of extra nitrogen can be beneficial. For crops that have lots of fruit (like tomatoes), you can apply something with higher K (and some P) mixed into the water. Using granular, slow-release product can also work to supply a little bit of fertilizer at a time, rather than a rush all at once.

It is important to not apply too much nitrogen to some crops, such as potatoes and tomatoes, or you'll get great plants, with no tubers or fruit. You don't want a potato with all top and no bottom or a huge tomato tree.

General Vegetable Fertilizer Targets

If you have a larger area garden, you could use fertilizer/nutrient targets for different vegetables based on a per area basis. Some general targets are presented below.

At a most basic level, all you really need to know is whether a vegetable is a light, moderate or heavy feeder, or if it is a plant that supplies its own nitrogen, since that is generally where we go first. This is also outlined below.

Based on the nature of a crop, you could apply differing amounts of fertilizer to meet the approximate needs of the crop. A heavy feeder is going to need more fertilizer up front, and a top up later on in the season. You can also rotate your crops to take advantage of nutrient use, to avoid over applying fertilizer.

NOTE: All of the specific quantities of nutrients represent the weight of ACTUAL nutrient (e.g., N, P₂O₅, K₂O) per area, therefore adjustment will be required for the specific fertilizer product analysis that is used.

Crop	Nutrient Need (Feeder)	Nitrogen (N)	Phosphorus (P)	Potassium (K)	Other Nutrients
Succulent Legumes (peas, beans)	Soil Booster	Not much needed other than a small amount prior to planting			
Beans (specifically)	Soil Booster	3g/m ²	12-16g/m ²	3-6g/m ²	Sulphur = 2-3g/m ²
Cole Crops (broc/cab/caul)	Heavy	6-10g/ m ²	15-18g/m ²	17-20g/m ²	S = 3g/m ² ; Boron = 2g/m ²
Root Vegetables (carrots/beets/radishes)	Light	8-11g/m ²	12-13g/m ²	25g/m ²	
Potatoes	Medium	14g/m ²	9-11g/m ²	44g/m ²	S = 2g/m ²
Lettuce	Heavy	5g/m ²	12-16g/m ²	13-17g/m ²	S = 3g/m ²
Spinach	Medium				
Cucurbits (cuc/pump/squash)	Medium	6g/m ²	12-14g/m ²	13-17g/m ²	S = 3g/m ²
Bulb Vegetables (onions/garlic)	Light	11g/m ²	12-16g/m ²	13-17g/m ²	S = 3g/m ²
Sweet Corn	Heavy	15g/m ²	3-4g/m ²	11g/m ²	S = 3g/m ²
Fruiting Vegetables (tom/pep)	Medium	4-8g/m ²	15-18g/m ²	13-17g/m ²	S = 3g/m ²

