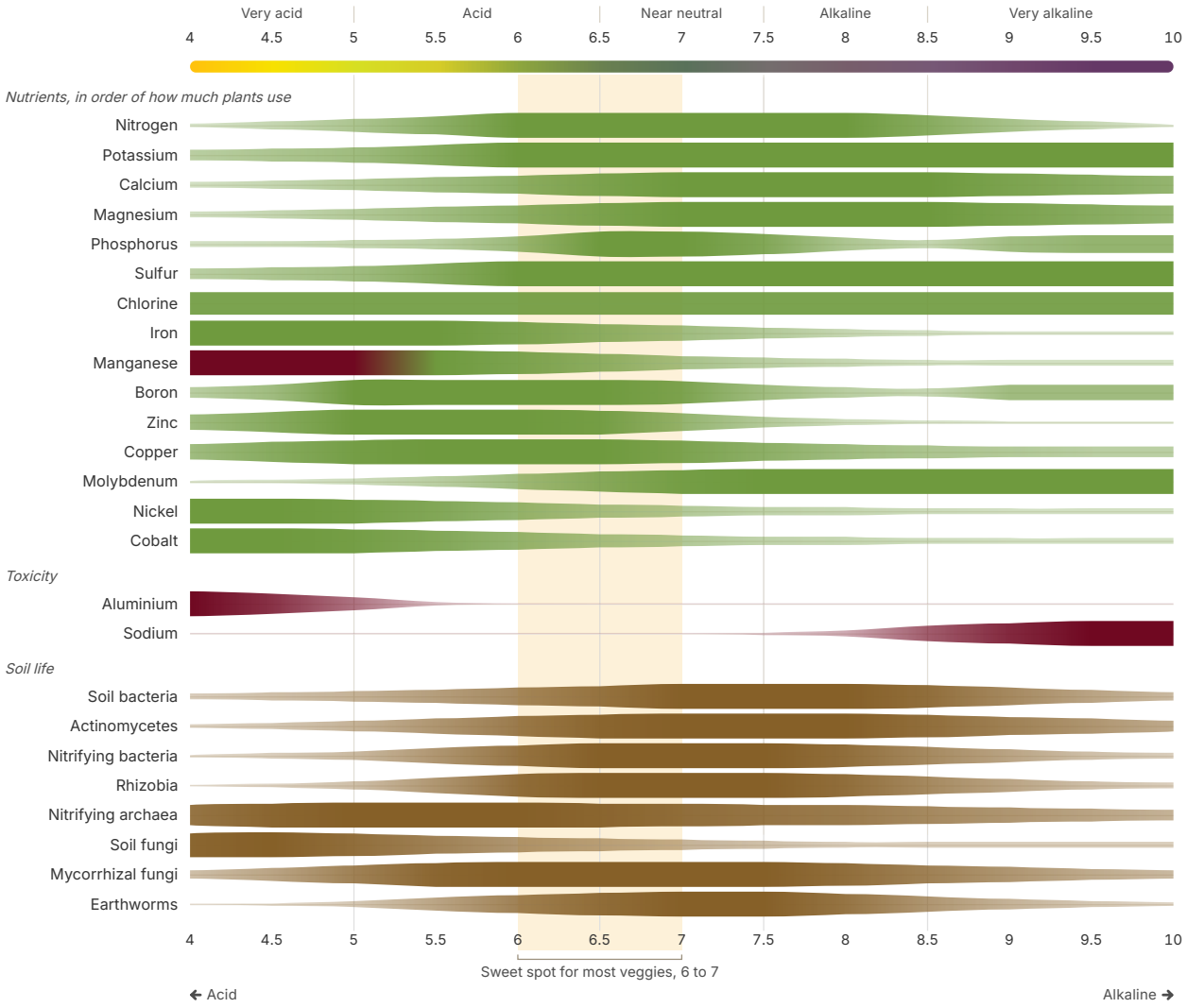
# Soil pH chart: what your plants can eat at every pH

How to read it: each band is one nutrient, fat where roots can get at it easily and pinched thin where it's locked up.




## Key

- Nutrient: fat and strong where it's easy to get
- Turns maroon: too much (manganese below about 5.3)
- Toxicity: fat where it does harm
- Soil life: fat where it thrives
- Veggie sweet spot, pH 6 to 7
- Rough home test-kit colours

### pH in water

The pH figures are pH in water, which is what home kits and cheap meters read. Lab reports in calcium chloride ($CaCl_2$) read lower, typically by 0.6 to 1.2, so a lab 5.2 is roughly 6 here.

### Most veggies: 6 to 7

That's where nearly every nutrient is easy for roots to reach. Below 5.5, aluminium and manganese turn toxic, and above 7.5, iron, manganese, zinc and phosphorus lock up.

### Soil life

Bacteria do much of the work of returning organic matter to a form plants can use, and they grow fastest above about pH 7. Fungi show the opposite pattern and dominate acid soils. Acidic conditions don't suit earthworms, or the bacteria that allow peas and beans to fix nitrogen.

**milkwood.net/soil-ph**

Drag the interactive version, find your crop's pH and how to fix your soil.

After Truog (1946) and the Potash Development Association, adjusted from extension sources. A teaching diagram for well-drained mineral soils: band widths show which way availability moves, not how much is in your soil. Chlorine, nickel and cobalt bands are estimates.

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