

# Gilbert Aide-de-Camp

Your friendly Outdoor Assistant

## Fertilisers 4 Plants

Fertilisers play an important part in the life of your lawn and garden. They supply essential nutrients needed for healthy plant growth. Nutrients that may be missing from the soils, and need "topping-up" from time to time.

The main Nutrients are: Nitrogen; Phosphorus; and Potassium; also known as (NPK), with smaller amounts of Magnesium, Calcium, Sulphur and other essential elements.

Fertilisers can be applied in two methods: Liquid or Slow Release, and two forms: Chemical and Organic.

### • Liquid

Liquid fertilisers release their nutrients quickly so they can be taken up by the roots and leaves immediately.

They are usually in the form of spray packs that you connect to your garden hose, or concentrated liquid that you can mix with water in a watering can.

### • Slow Release

Slow Release fertilisers deliver their nutrient payload over a long period of time. They come in the form of granules, pellets or droplets with polymeric coatings (controlled release).

Over the period of many weeks, the nutrients are released slowly by rain/irrigation helping to breakdown the solid form.

These are generally spread over lawns by hand or a mechanical spreader, or by sprinkling them onto gardens and pots.

### • Chemical form

Chemical fertilizers (or inorganic or synthetic) have been refined to extract nutrients and link them in exact ratios with chemical fillers.

Long-term use of chemical fertilizers can change the soil pH, and upset beneficial microbial ecosystems.

### • Organic form

Organic fertilizers are usually made from plant or animal waste or powdered minerals, and the nutrients remain bound up in their natural forms.

Further to the nutrients they provide, Organic fertilisers improve the structure of the soil and increase its ability to hold water and nutrients.



### NPK Ratio

Most fertilisers are labelled with a NPK Ratio, or the percentage of Nitrogen, Phosphorus and Potassium in the fertiliser. N – Nitrogen helps plants grow faster and greener. Nitrogen can be depleted in plants over time, or washed away by rain. P – Phosphorus is good for root growth, disease resistance, and for flowering and seed or fruit growth. K – Potassium (Potash) also helps with root growth, and drought and disease resistance. Potassium has a scientific formula of  $K_2CO_3$  or  $K_2SO_4$ , hence the "K" assignment.

So a NPK rating of: 4.2 – 2.8 – 2.6 is = 4.2% of Nitrogen, 2.8% of Phosphorus, and 2.6% of Potassium.

And a NPK rating of: 36 – 0 – 0 is = 36% Nitrogen, 0% Phosphorus, 0% Potassium.

Caution with high Nitrogen fertilisers, as the plants may not be able to absorb this amount, and the excess can be washed into waterways and then contribute to algae blooms.

The NPK percentage doesn't add up to 100%, and the rest of the fertiliser is comprised of other elements and "fillers". Chemical fillers are required so that the concentrated nutrients don't damage or burn your plants. Organic fillers are more natural components that are also beneficial to your soil.

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