

The power of pee

You can fertilise your veges, save water and reduce your environmental impact by using your own urine in the garden, writes **Dee Pignégu**y

There is no waste in nature and all the waste products of living things are used as raw materials by others. In natural ecosystems, soil organisms break down organic matter making nutrients accessible to plants. It is nature's digestive system in action. Organic gardeners recycle crop residues and animal wastes and are surrounded by organic matter free for the gathering – manures, seaweed, grass clippings, nettles, comfrey and urine.

The easiest to gather and use is your own urine. There is a long human history of using urine for fertilising plants as it usually does not carry a disease risk. If we could overcome our aversion for this excellent fertiliser we could help clean our waterways, while we reduce our water charges, manage the pollution it causes and return nutrients to our gardens.

Below: Dee Pignégu's vegetable plants grow well with diluted urine as a fertiliser



Photos: Mike Pignégu

Urine is a blood byproduct removed by the kidneys and stored in the bladder until discharged through the urethra. It is typically sterile (free from bacteria) when it leaves the body, and is best used immediately because after 24 hours the urea turns to ammonia (the urine smell).

Human urine allows us to cycle back the nutrients from the food we eat, and is a fast-acting excellent source of nitrogen, phosphorus and potassium as well as trace elements necessary for plant growth and soil microorganisms.

For use on garden plants it can be diluted 1 part urine to 10 parts water, but if you keep your body well hydrated, a 1 to 5 ratio would be fine. Pot plants are more sensitive to fertilisers and 1 to 20 would be better. Urine counts as a 'green' and helps activate decomposition

of mulch material around plants, especially dried grass clippings.

The pH of urine ranges between 4.6 and 8 (depending on the acidity of the person's body). A high protein diet produces acidic urine, while vegetarian diets produce a more alkaline urine.

In human urine, nitrogen occurs in the form of urea and in a 24-hour period,

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Above: Why flush your valuable urine away when you could be using it as a fertiliser in your veg garden?

the urea nitrogen level can be 6–17 grams. We normally excrete 0.8–1.5 litres per day (enough to fill three bathtubs a year!).

Researchers at the University of Kuopio's Department of Environmental Sciences in Finland working on sustainable fertilisation concluded that 'urine produced by one person over a year would be enough to grow 160 cabbages—more cabbages than could be grown in a similar plot fertilized with commercial fertilizer'. They believe that 'recycling urine as fertilizer could not only make agriculture and wastewater treatment more sustainable in industrialized countries, but also bolster food production and improve sanitation in developing countries'.

In case you are worried about the hygiene police, if you have hepatitis B or HIV, which are transmissible by direct contact with urine, don't use your pee on the garden. Having said that, there is no data on disease transmission through consuming food from soil fertilised with urine. And of course you will not be pouring your urine directly onto crops but either onto the soil, the mulch material around the plants or into the compost heap. ☑

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