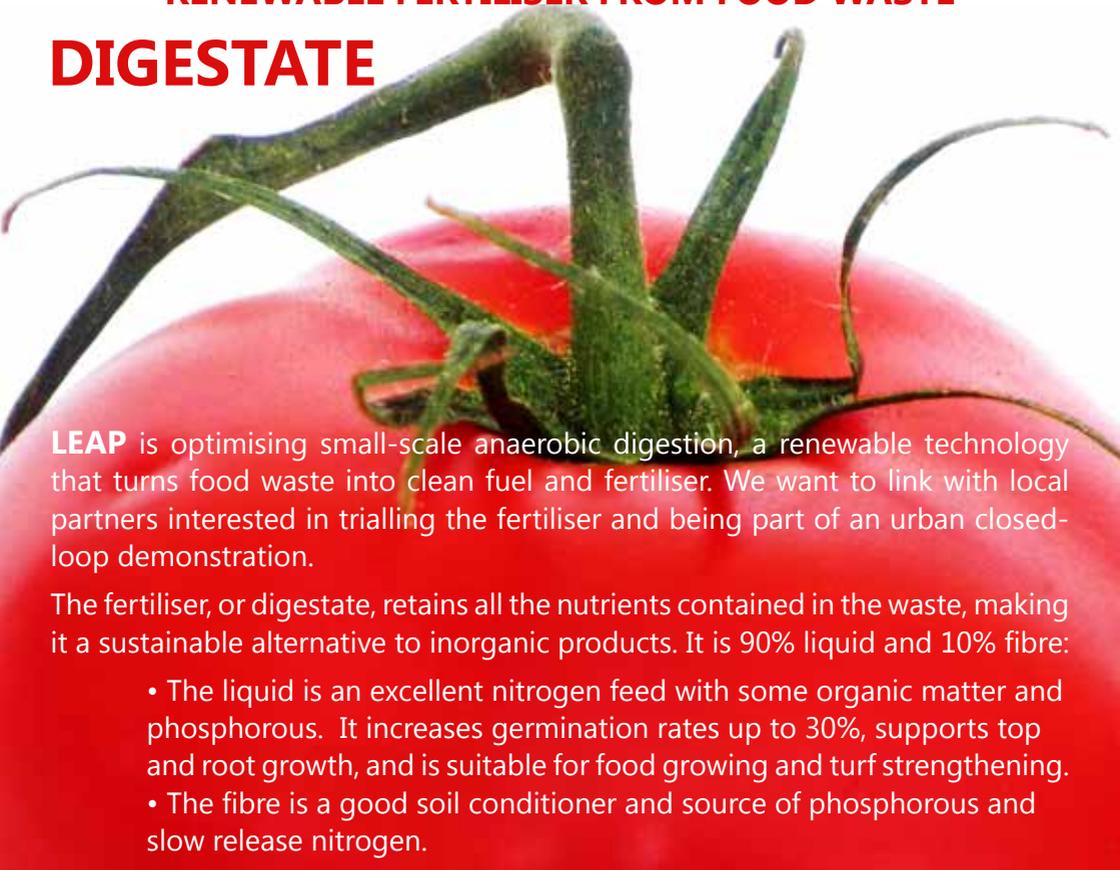


RENEWABLE FERTILISER FROM FOOD WASTE

DIGESTATE

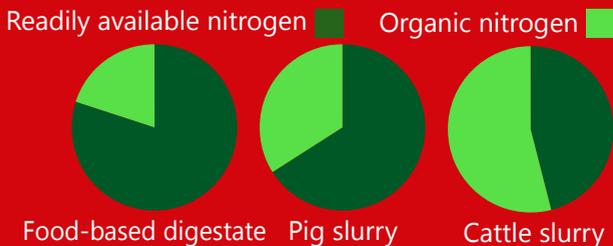


LEAP is optimising small-scale anaerobic digestion, a renewable technology that turns food waste into clean fuel and fertiliser. We want to link with local partners interested in trialling the fertiliser and being part of an urban closed-loop demonstration.

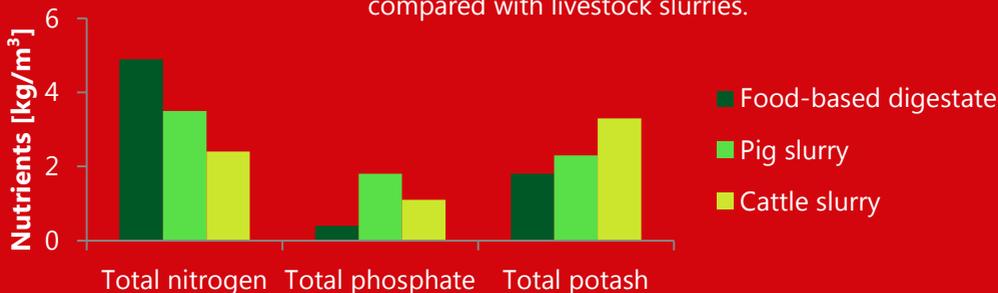
The fertiliser, or digestate, retains all the nutrients contained in the waste, making it a sustainable alternative to inorganic products. It is 90% liquid and 10% fibre:

- The liquid is an excellent nitrogen feed with some organic matter and phosphorous. It increases germination rates up to 30%, supports top and root growth, and is suitable for food growing and turf strengthening.
- The fibre is a good soil conditioner and source of phosphorous and slow release nitrogen.

Nitrogen analysis: shows an impressive 80% of the total nitrogen in food waste-based digestate is readily available to plants.



Digestate fertiliser values: average nutrient content of food-based digestate, compared with livestock slurries.



COMPOST COMPARISON

While digestate has high levels of readily available nitrogen (leaf growth), compost is principally a source of potash (fruiting), phosphate (roots and shoots) and slow release nitrogen as well as a good source of organic matter. These complementary products are compared below:

	Food based whole digestate		Green Compost	
	Total (kg/t)	Readily available (kg/t)	Total (kg/t)	Readily available (kg/t)
Nitrogen	5	4 (80%)	7.5	0 (0%)
Phosphate	0.5	0.25 (50%)	3	1.5 (50%)
Potash	2	1.6 (80%)	5.5	4.4 (80%)

DIGESTATE VS ARTIFICIAL FERTILISER

Intensive agriculture relies on artificial fertilisers, which can reduce soil organic matter and contribute to soil compaction, water logging, and low water retention. On some land, crops have decreased and trace mineral deficiencies appeared, despite chemicals being added.

Digestate helps restore depleted land and improving good land by stimulating soil activity and health with its organic matter, macro and trace minerals.

- The equivalent of four tonnes of fossil oil is required to make one tonne of artificial nitrogen.
- All artificial fertiliser is transported many miles.
- Rock phosphate, used to produce phosphate fertiliser, is a diminishing natural resource that requires energy intensive extraction and processing.

As food and fuel prices rise, digestate presents a sustainable, lower-cost option as a locally-sourced, renewable fertiliser.

TRIAL FOR FREE

We are looking for local organisations, groups and individuals interested in trialing the fertiliser:

T 020 8888 6293 **M** 07864 002189

E leap@communitybydesign.co.uk

W www.communitybydesign.co.uk/leap

