

## Digestate Information Sheets No.7 – Available Nutrient Content of Liquid and Solid Digestate Applied at Different Rates

Digestate is available in 3 main forms either **whole** liquid Digestate, separated **liquid** Digestate or **separated fibre**. The nutrient content can be variable depending on the feedstock used in the system and how the digestate is processed. Table 1 below provides information on the available nutrients for a variety of liquid Digestate applied at different rates and Table 2 below provides information on the available nutrients for differing fibre digestates applied at different rates. The amounts of nutrients available used for these estimates assumes the material is applied using the best available practices and optimum timing to obtain the maximum benefit.

While these figures can act as a guide it is strongly recommended that you request a nutrient analysis report from the supplier or have one done yourself. Any material that is sold or supplied as PAS 110 accredited should also include a report on its fertiliser value.

**Table 1**

Liquid digestate fertilisers	Application Rate (m <sup>3</sup> /Ha)	Application Rate (gallons/acre)	Available Nutrients in year of application					
			N (kg/ha)	N (units/acre)	P <sub>2</sub> O <sub>5</sub> (kg/ha)	P <sub>2</sub> O <sub>5</sub> (units/acre)	K <sub>2</sub> O (kg/ha)	K <sub>2</sub> O (units/acre)
Digestate 1 (whole)	15	1,350	58.5	46.8	29.3	23.4	31.1	24.8
	25	2,200	97.5	78.0	48.8	39.0	51.8	41.4
	35	3,100	136.5	109.2	68.3	54.6	72.5	58.0
Digestate 1 (Separated liquid)	15	1,350	51.0	40.8	27.0	21.6	44.6	35.6
	25	2,200	85.0	68.0	45.0	36.0	74.3	59.4
	35	3,100	119.0	95.2	63.0	50.4	104.0	83.2
Digestate 2 (Whole)	15	1,350	44.3	35.4	12.8	10.2	8.1	6.5
	25	2,200	73.8	59.0	21.3	17.0	13.5	10.8
	35	3,100	103.3	82.6	29.8	23.8	18.9	15.1
Industrial digestate (whole)	15	1,350	40.5	32.4	14.6	11.7	68.0	54.4
	25	2,200	67.5	54.0	24.4	19.5	113.4	90.7
	35	3,100	94.5	75.6	34.1	27.3	158.8	127.0
Farm-based digestate (whole)	15	1,350	29.3	23.4	12.8	10.2	67.5	54.0
	25	2,200	48.8	39.0	21.3	17.0	112.5	90.0
	35	3,100	68.3	54.6	29.8	23.8	157.5	126.0

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Table 2

Solid Digestate fertilisers	Application Rate (tonnes/Ha)	Application Rate (tonnes/acre)	Available Nutrients in year of application					
			N (kg/ha)	N (units/acre)	P <sub>2</sub> O <sub>5</sub> (kg/ha)	P <sub>2</sub> O <sub>5</sub> (units/acre)	K <sub>2</sub> O (kg/ha)	K <sub>2</sub> O (units/acre)
Digestate 2 (separated fibre)	15	6	21.4	17.1	30.0	24.0	24.7	19.8
	25	10	35.7	28.5	50.0	40.0	41.2	32.9
	35	14	49.9	39.9	70.0	56.0	57.6	46.1
Digestate 3 (Separated fibre)	15	6	16.2	13.0	32.3	25.8	32.4	25.9
	25	10	27.0	21.6	53.8	43.0	54.0	43.2
	35	14	37.8	30.2	75.3	60.2	75.6	60.5
Digestate 4 (Seperated fibre)	15	6	27.1	21.6	18.8	15.0	20.7	16.5
	25	10	45.1	36.1	31.3	25.0	34.4	27.5
	35	14	63.1	50.5	43.8	35.0	48.2	38.6
Digestate 5 (Seperated fibre)	15	6	22.8	18.2	47.8	38.2	22.5	18.0
	25	10	38.0	30.4	79.6	63.7	37.6	30.1
	35	14	53.1	42.5	111.5	89.2	52.6	42.1
Industrial (Seperated fibre)	15	6	63.0	50.4	9.7	7.7	25.2	20.2
	25	10	105.0	84.0	16.1	12.9	42.1	33.7
	35	14	147.0	117.6	22.6	18.1	58.9	47.1

## Liming value

Most liquid digestate products are alkaline but have a low lime value. Some fibre digestates and other types of organic fertilisers including paper crumble, lime stabilised biosolids and some have a useful liming value. It is important, where materials with a high liming value are used regularly, that soil pH is monitored at least every 2 years in order to avoid raising soil pH above that desirable for the crops grown.

The liming value of the waste should be expressed as a percentage of the liming value of calcium oxide (CaO) as this will enable you to calculate an appropriate rate using [Technical Note \(TN656\): Soils information, texture and liming recommendations](#). Liming values may range from 2 to 15% CaO, but higher values have been reported in exceptional cases. More information on the neutralising value (NV) of different materials can be found in [Technical Note TN714: Liming materials and recommendation](#).