



The Potash Development Association

Organic Materials

Animal manures and other sources of
Phosphate, Potash, Magnesium and Sulphur

2017

A guide to the total and available
phosphate, potash, magnesium
and sulphur contents.

for nitrogen contents and full details see the data source:
AHDB Nutrient Manual (RB209) 2017.

Typical phosphate, potash, magnesium and sulphur contents in some animal and other organic materials. These can be used as default contents in the absence of actual measured or declared values.

	DM	Total nutrients				Available nutrients ⁽¹⁾	
		Phosphate P ₂ O ₅	Potash K ₂ O	Magnesium MgO	Sulphur ⁽²⁾ SO ₃	Phosphate P ₂ O ₅	Potash K ₂ O
Fresh FYM⁽³⁾	%	kg/t				kg/t	
Cattle	25	3.2	9.4	1.8	2.4	1.9	8.5
Pig	25	6.0	8.0	1.8	3.4	3.6	7.2
Slurries	%	kg/m ³				kg/m ³	
Cattle ⁽⁴⁾	6	1.2	2.5	0.6	0.7	0.6	2.3
Pig ⁽⁴⁾	4	1.5	2.2	0.7	0.7	0.8	2.0
Separated slurries (liquid)	%	kg/m ³				kg/m ³	
Strainer box (cattle)	1.5	0.3	1.5	ND	ND	0.15	1.4
Weeping wall (cattle)	3	0.5	2.3	ND	ND	0.25	2.1
Mechanical separator (cattle)	4	1.2	2.8	ND	ND	0.6	2.5
Pig	3	1.1	2.0	ND	ND	0.6	1.8
Separated slurries (solid)	%	kg/t				kg/t	
Cattle	20	2.0	3.3	ND	ND	1.0	3.0
Pig	20	3.7	2.0	ND	ND	1.9	1.8
Poultry manures	%	kg/t				kg/t	
	20	8.0	8.5	2.7	3.0	4.8	7.7
	40	12	15	4.3	5.6	7.2	14
	60	17	21	5.9	8.2	10.2	19
	80	21	27	7.5	11	12.6	24
Biosolids	%	kg/t				kg/t	
Digested cake	25	11	0.6	1.6	8.2	5.5	0.5
Thermally dried	95	55	2.0	6.0	23	28	1.8
Lime stabilised	25	7.0	0.7	2.4	7.4	3.5	0.4
Composted	40	10	3.0	2.0	6.1	5.0	2.7
Composts	%	kg/t				kg/t	
Green	60	3.0	6.8	3.4	3.4	1.5	5.4
Green/food	60	4.9	8.0	3.4	5.1	2.5	6.4
'Wastes'	%	kg/t or kg/m ³					
Paper crumble (chemically/physically treated)	40	0.4	0.2	1.4	0.6	ND	ND
(biologically treated)	30	3.8	0.4	1.0	2.4	ND	ND
Mushroom compost	35	5.0	9.0	ND	ND	ND	ND
Water treatment cake	25	3.4	0.4	0.8	5.5	ND	ND
From food industry (general)	5	0.7	0.2	ND	ND	ND	ND
Digestates – Whole		kg/m ³				kg/m ³	
Food based	4.1	1.1	2.4	0.2	0.2	0.7	2.2
Crop based	5.5	1.7	4.4	0.6	0.6	1.0	4.0

⁽¹⁾ Nutrients available to the next crop (kg/tonne of product, not %).

⁽²⁾ See back page for sulphur availability.

⁽³⁾ Potash values will be lower if FYM is stored in the open for long periods.

⁽⁴⁾ Adjust nutrient contents if % DM is higher or lower.

DM = Dry matter. **ND** = No data.

To convert **kg/t** to **units/ton**, multiply by 2.

To convert **kg/m³** to **units/1000 gallons**, multiply by 9.

Sulphur availability from organic materials

Organic materials contain valuable amounts of crop-available sulphur and recent research has quantified sulphur supply from livestock manures and biosolids applications. Sulphur from autumn applications may be lost via overwinter leaching. The quantity leached will depend on soil type and overwinter rainfall and is likely to be higher on light textured soils in high rainfall areas.

Organic material	% total SO ₃ available
Autumn applied	
Livestock manures	5-10
Biosolids	10-20
Spring applied	
Cattle FYM	15
Pig FYM	25
Poultry manure	60
Cattle/pig slurry	35
Biosolids	20

The importance of laboratory analysis and sampling

The nutrient content of organic manures on farms vary widely and so it is better to have a laboratory analysis carried out to get the correct values specifically for the farm and the year in question. However, it is important that the sample taken for analysis is truly representative. This means that sampling should be undertaken according to the protocol given in the AHDB Nutrient Management Guide (RB209), Section 2 Organic Manures.

In the absence of a recent analysis, and where thorough sampling can not be done, these typical values represent an alternative for nutrient planning purposes.

FOR MORE INFORMATION AND CONTACT DETAILS SEE THE PDA WEBSITE

www.pda.org.uk



The Potash Development Association
is an independent technical organisation formed to support the efficient use of potash fertiliser in the UK.

