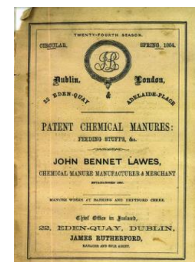


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## Circular: Patent Chemical Manures: Feeding Stuffs, Etc.



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### Analysis and Report of Lawes' Manures for 1864

#### Professor Apjohn and Professor Cameron

Professor Apjohn and Professor Cameron (1864) *Analysis and Report of Lawes' Manures for 1864* ;  
Circular: Patent Chemical Manures: Feeding Stuffs, Etc., pp 6 - 6 - DOI:  
<https://doi.org/10.23637/ERADOC-1-142>

**ANALYSES AND CHEMISTS' REPORTS FOR 1864.**

*South Hill, Blackrock, March 14, 1864.*

Having on Monday, the 7th instant, taken in person and without any selection, a sample of the cargo of LAWES' Superphosphate which had been just transferred to your store from a vessel lying in the Canal Docks, I have made it the subject of a careful analysis, and find it to have the following composition:—

Moisture, .. .. .	14.40
Sand, .. .. .	3.60
Bi-Phosphate of Lime, .. .. .	14.34
(Equivalent to Phosphate of Lime made soluble 22.40)	
Phosphate of Lime .. .. .	24.82
Hydrated Sulphate of Lime, with a little Carbonate of Lime	28.08
Organic Matter, .. .. .	12.39
(Yielding Ammonia 0.61)	
Salts of Potash and Soda .. .. .	2.42
	100.00

From these results I am enabled to say that this Manure is practically the same with the cargoes supplied you in 1863 ; and that as a fertilizer, particularly for land which is to grow green crops, it must maintain the reputation it has so long enjoyed. In the preparation of 100 parts by weight of this Superphosphate 47.22 parts of Phosphate of Lime were employed, and of this large amount of Phosphate 22.4 parts have been rendered soluble by the action of the sulphuric acid. The amount of bi-Phosphate (the most important ingredient) is the same as in the manure of 1863 ; but the total Phosphate of Lime used is appreciably higher, being in 1863 41.78, and in the article of the present year 47.22. I should not omit to add that the ammonia in the specimen to which this report refers is nearly the double of that found in the Lawes' Superphosphate of 1863. As a consequence of these differences the material at present in your depôt is in a slight degree more valuable than that of which you have made so extended a sale during the past season.

JAMES APJOHN.

I certify that I have analysed a specimen of LAWES' Superphosphate taken by me from a cargo landing at the depôt, and have found it to contain in 100 parts the following:—

Moisture, .. .. .	12.28
Organic Matter, and Salts of Ammonia* .. .. .	11.18
Bi-Phosphate of Lime .. .. .	16.00
Phosphate of Lime .. .. .	13.37
(Equal to Bone Phosphate rendered soluble by acid 25.40.)	
Sulphate of Lime .. .. .	40.82
Alkaline Salts .. .. .	2.24
Insoluble Matters .. .. .	4.16
	100.00

\* Capable of yielding Ammonia .. .. . 1.30

This is a first-class Superphosphate. It contains 37 per cent. of Phosphate of Lime, of which about 26 per cent. is soluble. It also contains a fair proportion of ammonia.

CHARLES A. CAMERON, M.D., M.R.I.A.,  
*Analyst to the City of Dublin.*

6, Waterloo-terrace, Upper Leeson-street, Dublin,  
15th March, 1864.