

	A B COURTRAI DISTRICT.		C D ANTWERP DISTRICT.		E District in Holland.	F Dublin.	G Armagh.
	Heestelt.	Escanaffles.	Hamme Zog.	Not named.			
Potash	9.69	30.62	26.67	28.62	21.35	11.78	6.60
Soda	24.16	None.	16.88	0.48	12.65	11.82	6.61
Lime	19.37	22.04	22.15	21.19	21.30	14.85	23.67
Magnesia	4.34	4.45	4.70	4.05	3.50	9.38	4.22
Sesquioxide of Iron	5.66	2.03	1.31	2.53	2.74		14.10
Alumina	0.56	0.58	0.86		1.67	7.32	
Manganese	Trace.	Trace.	Trace.				1.12
Sulphuric Acid	7.93	8.33	8.18	13.43	11.22	3.19	9.30
Phosphoric Acid	14.10	15.78	10.66	12.19	12.82	13.05	7.29
Silicic Acid	3.85	4.54	3.20	3.36	6.18	25.71	0.94
Chloride of Sodium	10.34	11.63	5.49	14.15	6.57	2.90	26.15
	100.00	100.00	100.00	100.00	100.00	100.00	100.00

In the ashes, both of the Belgian and of the Russian specimens, we meet with a very large amount of alkali (nearly 40 per cent.): the quantity, too, of phosphoric acid is very considerable (from 10 to 15 per cent.). These analyses then furnish a further proof that flax must be classed among the most exhausting crops, for, the amount of valuable mineral substances which it removes from the soil considerably exceeds the quantity which is generally extracted from it in the form of wheat or corn.

From a statement of Mr. McAdam, it appears that one rood of land yields about 12.7 cwt. of recently pulled flax plant. If we take this number as the basis of calculation, and the average per centage of ash at 3.53 lb., of alkalies at 39.58 lb., and of phosphoric acid at 12.51 lb., we find that a flax crop removes from a rood of land not less than 12.21 lb. of alkalies, and 5.94 lb. of phosphoric acid. On the other hand, we have learned from the researches of Mr. Way (*Royal Agricultural Journal*, vol. vii. p. 593), that a rood of land, which has served for the cultivation of wheat, loses (an average taken from a great number of analyses) about 7.5 lb. of alkali and 6.9 lb. of phosphoric acid. These figures show that the amount of phosphoric acid in the flax crop closely approaches that of the wheat, whilst the latter extracts only about half the quantity of alkali which we find in the former. Hence, it would appear, that a flax crop is at least as exhausting as a crop of wheat.

There is, however, one striking point of dissimilarity between the cultivation of wheat and that of flax, and we are indebted to Sir R. Kane for having for the first time brought this point under the notice of the farmer in a forcible manner, viz.:—"That while the mineral ingredients which we remove from our fields in wheat, or cerealia in general, become constituents of food, and enter in this manner into a circulation, from which, even under very favorable circumstances, they return to the soil only after the lapse of some time, the woody fibre of flax, as a necessary preliminary to its being used by man, is separated to a considerable extent from those very mineral substances which are so essential for its successful growth. This mineral matter, when economized in a proper manner by the farmer, may be returned to his field to keep up the equilibrium of its fertility.