

solution of borax, or basic silicate of potash; a brown coloring matter; albumen; casein; starch; pectin; cellulose; and salts."

The result of Dr. Hodge's experiments has been further placed in a very clear light by Mr. Wilson. The object of these was to ascertain the relative proportions of the produce of flax, and also the distribution of inorganic matter in them. The flax employed had been steeped in the ordinary way, and was found to contain 1.73 per cent. of ash. Of this, air-dried straw, 4,000 lb. weight were taken, which produced:—

Of dressed fibre	500 lb.
Of fine tow	132 "
Of coarse tow	192 "

Of fibre in all 824 lb.

These products contained:—

In the dressed flax	4.48 lb. of ash
" fine tow	2.08 "
" coarse tow	2.56 "

Or, in the whole of the fibre 9.12 lb. inorganic matter.

So that 59.08 lb., which the crop had withdrawn from the soil, remained in the useless portion, while only 9.12 lb. were carried off in 824 lb. of the dressed fibre and tow.

Analysis of the flax plant and of the soils in which it is grown were first carefully made by Sir. R. Kane, and afterwards by Dr. Hodges and others. They have been repeated by Messrs. Mayer and Brazier, in the Laboratory of the Royal College of Chemistry. The localities from which the latter obtained their specimens of flax, by the aid of Mr. A. Marshall of Leeds, were Esthonia, or Estland, Livonia, or Lievland, Courland, and Lithuania. The first of these districts, with the second and third mentioned, are situated on the eastern shores of the Baltic; the fourth is the only inland country.

From their analysis, the following comparative table was made, from which it will be readily seen, in what points the ashes of these different specimens agree in composition.

	Lievland.	Courland.	Lithuania.	Estland.
Potash	43.42	37.44	36.61	25.70
Soda		3.74	3.06	8.37
Lime	21.35	25.39	24.09	26.41
Magnesia	7.79	7.71	7.45	11.74
Sesquioxide of Iron	1.15	1.13	1.04	1.02
Manganese		Trace.		
Chloride of Sodium		1.94	3.75	1.67
" of Potassium	1.81			
Phosphoric Acid	10.94	8.31	14.30	15.47
Sulphuric Acid	5.66	5.89	3.65	4.64
Silicic Acid	8.38	8.45	6.05	4.98
	100.00	100.00	100.00	100.00

We also append, in a tabular form, the result of Sir R. Kane's analysis of this plant, taken from his paper, read before the Royal Dublin Society, on the 6th of April, 1847.