

Description and quantities of manure per acre.	Dressed grain per acre in bushels and pecks.	Total grain per acre in pounds.	Straw per acre.
Section 1.	bush. pecks	lbs.	lbs.
Plot 3. No manure.....	17 3½	1207	1513
Plot 2. 14 tons of farmyard dung	27 0½	1826	2454
Section 2.			
Plot 10 b. No Manure.....	17 2½	1216	1455
Plot 10 a. Sulphate of ammonia 224 lbs	27 1½	1850	2244
Section 3.			
Plot 5a1. Ash of 3 loads of wheat-straw	19 0½		1541
Plot 5a2. Ash of 3 loads of wheat-straw, and top-dressed with 224 lbs. sulphate of ammonia.	27 0		2309
Section 4.			
Plot 6a. Liebig's wheat manure 448 lbs.	20 1½	1400	1676
Plot 6b. Liebig's wheat manure 419 lbs. with 112 lbs each of sulphate and muriate of ammonia.	29 0½	1967	2571

torrested motives, nobody could believe him to be actuated by them. However he was not satisfied, and he even went so far as to send his son over to England to see that the experiments were really such as they had been represented to be. I believe the great chemist died unrepentant, believing to his last hour that his mineral theory was the correct one.

In table V, which is rather too long and too intricate to give here, the experimenters compare the produce of the unmanured plot, with that of another which, except in the year 1844, when superphosphate of lime and silicate of potass were used (giving, however, less than one bushel of increase), was manured every season with ammoniacal manures alone. The average yields for the years from 1845 to 1850 of these plots (unmanured, and manured with ammoniacal matters) were as follows:

Unmanured.	Bush. pecks.	Straw.	Increase from manure. per acre. Bush. pecks	Straw.
Mean per annum....	17 2½	1756 lbs.		
Ammoniacal manures.				
Mean per annum....	25 3½	2698 lbs.	8 0½	933 lbs.

PLATE III.



Fed for Fat.

Lot A, No. 3. Carbohydrate fed.



Fed for Lean.

Lot B, No. 3, Protein fed.

Plate III shows in cross section the proportional size of muscles (lean meat, of the hogs No. 3 of each lot) cut through the small of the back. NOTE.—The lean meat is striped black and white; the fat is shown in clear white. The cuts are made from the dressed hogs lying on their backs.

In this table we see that the yields of the unmanured plots are so nearly alike that for all practical purposes they may be taken as equivalent; that the dressing of 14 tons per acre of farmyard dung raised the produce by nearly ten bushels an acre; that three loads of wheat straw burned increased the yield of the acre by the insignificant amount of one bushel, but that the addition of 224 lbs. of sulphate of ammonia to the ashes of the wheat straw added eight bushels to that yield; that 224 lbs. of sulphate of ammonia alone caused the crop to mount up to ten bushels more than the yield of the unmanured acre, and, lastly, that whereas Liebig's patent manure only gave an increased yield of 2 bushels and a peck more than the unmanured acre, the addition of 112 lbs. each of muriate and sulphate of ammonia to the much vaunted manure caused an increase of almost 10 bushels an acre.

It is really very wonderful, when one comes to think of it, that Baron Liebig would not be convinced by these, to an impartial eye, most satisfying experiments. He was too great a man to be suspected of wilful blindness, and as to in-

Now let us look at another table, in which are displayed several varieties of manures applied together; and the yield compared with the unmanured crop. To show the idea Lawes and Gilbert wished to convey to the reader, I will quote an example of the mixed manures:

	lbs.
Pearl ash	300
Soda ash.....	200
Sulphate of magnesia.....	100
Bone-ash.....	200
Sulphuric acid.....	150
Muriate of ammonia.....	200
Sulphate of do	200

Yield per acre of unmanured plot, 15½ bushels; yield of manured plot, 33½ bushels.

If the same series of experiments, the amount of ammoniacal manures being reduced from 400 lbs. to 65 lbs., the yield of the manured crop fell to 20 bushels per acre.