

CREDITOR.

1 sack of barley consumed by young chickens.....	£0 15 6
1 strike of barley for do., and grinding.....	0 4 4
1 ewt. bran.....	0 5 0
6 pecks tail wheat.....	0 6 0
Marketing expenses.....	0 6 1—1 16 11
	£6 0 5½

£6, Os. 5½., divided by 8, the number of hens, gives a net profit of rather more than 15s. for each hen.—*The son of a country Rector in Agricultural Gazette.*

GREAT MEETING OF THE HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND, AT GLASGOW.

On Wednesday evening, a lecture on manures was delivered in the Trades' Hall by Dr. Anderson, the chemist of the Society. The assemblage on the occasion, which was numerous, was almost entirely composed of agriculturists both from our home counties and from a distance. The learned gentleman was accompanied to the platform by the Lord Provost and the Duke of Roxburghe. On the motion of his Grace, his Lordship took the chair, and introduced Dr Anderson to the meeting; he was received with considerable applause.

Dr Anderson proceeded as follows:—It will be admitted, I think, on all hands, that there is scarcely any subject more deserving the attention of the farmer than the careful management of his manures. Under any circumstances this is a matter of vital importance; but the progress of agriculture, which now more than at any former time, compels every man to obtain from his land the greatest possible amount of produce, has given it even greater prominence than it before possessed, and necessitates a far more careful attention to the subject in all its bearings than it before required: and the introduction of what are commonly called artificial manures, has had the effect of still further complicating the whole matter. And opening up questions, which a very short time since would have been considered altogether beyond the range of such inquiries. The consequence of this is that our knowledge is at the present moment in a purely transition state, and is deficient in much of that definite information which is requisite for enabling us to arrive at legitimate conclusions regarding the comparative values of different manures, and many other points which it would be most desirable to have established in a satisfactory manner. In fact, any one who has occasion to inquire into those matters has questions constantly presenting themselves to him, in regard to which we possess no information at all

or other cases in which they render probable certain conclusions which might be established by the results of experiments made in the field, which have either never been made or have been done without those precautions required to raise them above the chance of fallacy. It has appeared to me that the present affords an advantageous opportunity of calling your attention to questions which must indubitably depend for solution on the mutual exertions of science and practice. For I hold it to be certain that the two must go together, and that though some of the facts we require may be determined in the laboratory, there are many questions which, though suggested by science, can be established only as facts by experiments in the field, performed with every attention to care and accuracy. I hold also that neither of these methods of experiment will in themselves suffice; they must go hand in hand if our results are to be of value. Separately the chances are that they lead to mere speculations, of which science will supply one set and practice the other, for you must allow me to say that practice occasionally ventures on speculations of its own. In discussing the general question of the economy of manures on the present occasion, I must be contented to do so only in a very general manner, as your time will not permit me to go into my details. My intention is rather to bring out some facts little attended to, and, if possible, to draw from the practical farmer such information as he may possess, or to induce some of those who now hear me, to add themselves to the number of those who endeavour experimentally to add to the common stock of information. And I shall advert, in the first place, shortly to the general properties of manures, and in doing this I may possibly have to touch upon some matters with which you may be already partially acquainted, yet which cannot, nevertheless, be too frequently brought under your notice. If we examine, then, any of our common plants, we find it to be composed of a considerable number of chemical substances. These substances may be divided into two great classes, separable from one another by a very simple experiment, which is neither more nor less than burning the plant. When this is done we obtain its *ash*, containing the whole of one of these classes; the other has, in the process of burning, passed into the state of gases, and so escaped the observation of our unassisted senses. The former of these are called the *mineral* or *inorganic* constituents of the plant, the latter the *organic* constituents, because they are peculiarly present in all organized beings. The latter of these classes is a limited one, and contains only four substances, carbon, hydrogen, oxygen, and nitrogen. The former is much more extensive, and comprehends a considerable number, of which the most important are sulphuric acid, phosphoric acid, lime, magnesia, potash, and soda. Now the existence of the plant depends