

## The annual meeting and dinner of the Markethill Agricultural Society

On 5th January 1843, the Newry Commercial Telegraph published a very detailed account of the meeting (which took place on 22<sup>nd</sup> December 1842) and all of the speeches and discussions that took place. From this report, several things are clear:

- Most farmers seem to be adopting Blacker's methods, and discussions centre around how to finesse them rather than whether they are right in principle.
- Many larger farmers, who have enough land to do so, are actively experimenting with variations of crop rotations, and liquid and solid manures.
- Flax is regarded as a 'difficult' crop – only succeeding when extremely good seed is used, only profitable in the best of years, and should only be grown every 8-10 years because it exhausts the land.
- The most successful crop rotations are quite complex, having up to a 7-8 year cycle.
- The high esteem in which Scottish agriculturalists are held.

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Any **text in bold** is my doing.

Alan Clarke  
August 2025

# THE EARL OF GOSFORD'S ANNUAL DINNER AT MARKETHILL

SIR,—The Earl of Gosford's Annual Agricultural Dinner at Markethill took place on 22nd December, and I shall give you the best account I can of it. I am quite aware, however, that the best I can send you will convey a very imperfect idea of what took place. The discussions were kept up with unabated interest until a very late hour, and the opinions delivered upon the important subjects brought under the consideration of the meeting by so many practical farmers cannot fail to be read with advantages by the occupiers of land in every quarter of the kingdom.

The dinner was held on the present occasion in the old Court-house, a new one having lately been built. A large transparency ornamented the end of the apartment behind the President's chair, and the other walls being decorated with laurel branches, and well lit up, the whole had a very excellent effect.

The Earl of Gosford being unwell, the chair was taken by Mr Blacker. Among the company were—D Ross Esq., MP for Belfast; Mr Burnett, a Scotch gentleman, who had come from Scotland expressly to attend the meeting; Mr Smith, of Deanston, the well-known advocate of the subsoil plough and furrow draining; Mr Murphy, editor of *The Farmers' Gazette*; Mr McKee<sup>1</sup>, of Markethill; Mr Clarke, of Rostrevor; Mr Harper, agent to Mr Wilson, of Dublin; Mr McKee, of Ballyharridan; Mr Kinmonth, of the Deer Park; Mr Nathaniel Greer; Mr Simpson, of Killen; Mr Crozier Christy, and a great many other practical farmers, his lordships invitations being always limited almost entirely to persons of this class.

As the usual toasts were given, the CHAIRMAN proposed, after expressing his regret at the absence of his Lordship -

“The Earl of Gosford, the Lord of the soil, and better health to him.”

The toast was ably responded to by Mr McKee, who bore ample testimony to the regret universally felt at his Lordship being unable to preside.

The CHAIRMAN then took out from the case which stood before him a Challenge Cup, given by his Lordship to be competed for by his tenantry, and to become the property of the farmer to whom it should be awarded for three successive years, as having the best cultivated farm, and the most farmer-like establishment, and then called on Mr Sandy Small, Secretary to the Markethill farming society, to read out the decision of the judges who had been appointed to inspect the farms of the different competitors, which was awaited with a degree of anxiety that scarcely be imagined. The honor of being awarded the cup, which was a remarkably handsome one, appeared to create an interest which a premium to five times the amount in money could not have excited; and I would recommend in all farming societies that his lordship's examples should, in this respect, be followed, as the very best plan that can be adopted to raise a spirit of emulation among the members

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<sup>1</sup> Probably Barnett McKee, who frequently sat on county grand juries with Blacker.

It appeared, from the Secretary's report, that the cup was adjudged on this occasion to James Greer Small, of Lattery; and that Samuel Byers, of Mowham, James McConnell, of Corneycrew, and M. Pollard, Markethill, were, according to the order of their names, the next in point of merit.

The CHAIRMAN then ordered the cup to be placed before the successful candidate, observing to him that he must consider it as merely entrusted to his care until the next meeting, when it must again when it must be again placed before the President, to be disposed of according to the future decision of the judges, at the same time adding an exhortation to exert himself not to lose the distinction that he had acquired—that had it had been often observed, it was easier to make money than keep it; and he (the Chairman) thought he would find it had been easier to gain at the cup than to retain it. After which the chairman gave the health of—

“Mr James Greer Small, the winner of the cup for this year.”

Mr SMALL, in returning thanks to his Lordship for the Cup, and to the Chairman and company for the honor they had done him in drinking his health, declared his determination to make the Cup his own, if any exertions that he could use would make it so.

The CHAIRMAN then gave—

“Mr Nathaniel Greer and the other Judges, who had taken so much pains and trouble in their decision.”

Mr GREER having returned thanks for himself and brother Judges, said:—The question might fairly be put to him, what he considered a well cultivated farm, and what was the best system of cultivation? These were questions which he thought would be better answered by Mr Blacker, or Mr Smith, of Deanston; but for himself, as regarded his own farm, he was favourable to flax which he cultivated upon a five-course rotation—potatoes, wheat, flax, clover, and oats; but he was quite aware that farmers would differ in their rotations, according to the nature of the land they occupied. There was one thing, however, in which he had formerly differed with Mr Blacker, and which he must now own himself to have been wrong in, and that was in regard to the benefit of repeated ploughings and harrowings of the land intended for his flax crop. This season he had prepared part of a field, by deep ploughings and several harrowings, for a crop of carrots, but afterwards put the whole into flax, and the part that was prepared as stated for the carrots was a most luxuriant crop, whilst the other part of the field that had been treated in the ordinary manner was very indifferent.

The CHAIRMAN then said:—I am desired by his Lordship to give the following explanation of what he considered included in the meaning of the expression, “a well cultivated farm,” and which, as the giver of the Cup, he wished particularly to be inserted in the instructions to the Judges next year. He then read the following particulars:—A well cultivated farm and most farmer-like establishment means, according to his Lordship,

1st. A farm which is properly divided into regular divisions, according to the rotation intended, so that the crops shall succeed each other in regular order, and effectually drained.

2d. Which shall be cultivated to such a rotation as shall for a permanency yield the best return, and keep the land in the highest condition.

3d. **A well cultivated farm** should depend mainly upon its own resources for manure, which **includes a suitable stock for house-feeding, and a proper tank for liquid manure**, all which are necessary. There may be cases in which extraneous manure may be allowed, but it must

form the exception, not the rule—near a town, for example, or to get into a rotation, where it will evidently not be necessary as a permanent practice—likewise lime, when required by the soil.

4th. The establishment must be suitable to the farm, and the neatness of the entire premises, fences, stack-yard, garden, &c.—to be all taken in to turn the scale where those material points are on a par.

His Lordship does not bind the competitors to any particular rotation; but two **scourging crops**<sup>2</sup> should clearly never succeed each other without fresh manure having been applied, and they never should be allowed even in this case, except at the end of the rotation, when the heart of the land is about to be immediately restored. His Lordship also considers one-tenth part of the arable land should be in turnips to feed the proper regular stuck, and that one cow for every three acres of arable land is necessary, and where this is not permanently kept throughout the year, an extra number should be fed in Winter. The Chairman, after exhorting them not to be discouraged by their present failure, then gave—

“Mr Samuel Byers and the unsuccessful candidates for the Cup this year.”

Mr BYERS, in reply, said:—Mr Chairman and Gentlemen, although I appear before you an unsuccessful competitor, I feel bound to return my very humble but grateful thanks for the kind and generous manner in which his Lordship has given so splendid a Cup to be competed for by his tenantry. Although I have not had the honor of obtaining the prize, I am neither downcast nor discontented. I feel more confidence and more courage than I had the first day I heard of such a prize being proposed. With all my heart, I wish Mr Small every comfort in his enjoyment of the Cup for *this* year, for I am determined that next year the said Cup shall be *mine*. I feel bound, on the part of myself and my unsuccessful friends, to return thanks to the Judges for the pains they have taken in forming their decision, which we are fully satisfied has been done conscientiously and properly, and let us exhort one another to double our exertions in order to be more successful hereafter; and we have good encouragement to do so, seeing that we have seen so near to an equality, this year, that it was a difficult matter to name the winner. For my own part, I will say, that if the same excellent Judges would give me a call about August next, I think I will be able to show them a farm as well divided, as well fenced, with as clean crops, and as good a stock, as any farm in any townland on his Lordship's estate, without excepting even that well known *honey-pot*, the townland of Lattery. This last year I have added thirty acres to my farm. This land was out of condition, and I have been obliged to rob my other land a little to enrich it, which has thrown me back; but I am not afraid that next year I will have a better face upon it. On the part of myself and my unsuccessful friends, I beg, Gentlemen, to return you our most grateful thanks for the honor you have done us in drinking our healths.

CHAIRMAN. —I shall now give “The health of Mr Pollard, the successful candidate for the Markethill Farming premium for the best acre of turnips.” I think, Gentlemen, it is quite unnecessary to swell the report of this meeting, or to take up your time by details of the **advantages derived by those who sow green crops. These advantages are at present universally known and acknowledged**, although formerly the case was different. I think it better, therefore, under present circumstances, to take the opportunity afforded, by drinking the health of the successful competitor for the best acre of turnips, to introduce the discussion of the first question which is appointed to be brought under the consideration of this meeting — viz., what is the proper proportion of turnips which should be grown on a well cultivated farm?

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<sup>2</sup> A crop which exhausts the land's fertility.

Sergeant POLLARD, in returning thanks, said that he had a farm of 40 acres, and was happy to find that he was the successful competitor for the premium for the best acre of turnips. He was an old soldier and had not been brought up to farming; but as he had the keeping of the coach horses, which gave him plenty of manure, he thought, in his farm of 40 acres, that one acre of turnips was quite sufficient. This announcement seemed to create a good deal of surprise, and several of the company expressed their dissent.

Mr M'Kee, being called upon, said he thought a farmer ought to have one acre in 15 at least in turnips.

CHAIRMAN. It appears to me there is something different in Sergeant Pollard's case from that of other occupiers of land, for he has a supply of manure from the coach horses quite independent of what he can make upon his farm. In the four and five-course rotation, which are those most followed in the best farmed districts of England and Scotland, the one-fourth or one-fifth part of the land is, each year, manured for green crops; and as potatoes are but little used there, the most of this proportion is under turnips, and by the great quantity of manure thus made on those farms the land is made to produce so abundantly. In this country the food of the population being in a great degree potatoes, his Lordship has mentioned 1-10th of the farm only as being the least quantity that a well-cultivated farm should have, according to the paper I have just read. This would require Mr Pollard to have four acres of turnips, in place of one; but, from the quantity of land I see Serjeant Pollard is able to manure, I think his stables make up for the deficiency, and think, upon examination, if that is the case, it will be found that if he had not his stables he must have the full quantity of turnips, and that his Lordship's limit would be *confirmed*, in place of *contradicted*, by such an examination. But I shall be glad to hear what some of the practical farmers present will say on the subject, and I beg Mr Kinmonth to give us his opinion.

Mr Kinmonth.—I hold 80 acres of land on Colonel Close's estate. Mr Blacker has said one-fifth of a farmer's holding should be under green crop, one half of that quantity in potatoes, and the other in turnips. This system I have followed for many years, and find the turnip crop to answer as well, if not better, than any other crop I have. I purchase cattle in the Autumn, if I have not a sufficient stock of my own rearing for the stalls, allowing two, if the turnips are a middling crop, and, if they are good, three per acre. These cattle, if purchased at a moderate rate, should pay, for feeding, about £4 per head. The tops or leaves of the turnips I find very useful for feeding young cattle. The manure, I think, would nearly pay for carting the turnips and attending the cattle. I have pursued this plan for many years, and it has paid me very well.

Mr NATHANIEL GREER (an independent farmer on the Richhill estate) – I entirely agree with Mr Kinmonth, it being quite impossible to have manure without turnips.

Mr THOMAS FERGUSON. I think one acre on a farm of 40 acres is quite insufficient—from 3 to 5 acres would be the least that would answer—and by sowing turnips after the first year you may have more potatoes than before, and the turnips too.

CHAIRMAN.—I think the general opinion seems to be going very much against Sgt. Pollard, in the opinion of our best Irish farmers, but I should wish to hear what my friend, Mr Burnett, who is one of the best farmers in Scotland, will say on the subject. He is a man so looked up to, even in Scotland, that Scotch farmers send their sons to serve him for nothing, in order to improve themselves by seeing his practice. I trust, therefore, due attention may be paid to what he shall say.

Mr BURNETT.—Gentlemen, when I first began farming, I commenced with about 5 acres of turnips, in a farm of 120; but as I gained experience, I have annually been increasing the quantity, from feeling that I made more by my farm by doing so. I have now got to 25 acres of turnips, and I expect next year to have 30 acres, or very near it. I only sow potatoes to answer the use of my family. I am sure turnips are the best crop, and by sowing turnips I sell nothing off my farm but what the stall-fed cattle and sheep carry off on their backs, and the wheat crop and produce of the dairy.

The CHAIRMAN then gave—" Turnip husbandry, the sure source of Agricultural improvement."

This point being settled to the satisfaction of the company, Serjeant POLLARD said he must consider himself wrong; and the Chairman proceeded to read the premiums given by his Lordship to his tenants generally. By the decision of the Judges, it appeared that

Mathew Black, of Cabra, got	1st premium,
Thomas Ferguson, of Grayhilla,	2d do
Andw. M'Cutcheon, of Ballyorgan,	3d do.

for the best cultivated farms.

Mr BLACK having returned thanks for his health having been drunk.

The CHAIRMAN said he had gained the premium from having had on his farm a proper proportion of turnips for his cattle, the importance of which had been testified by the discussion which had just taken place; but as it was so hard to overcome the ignorant prejudices of the small farmers upon this subject, he thought this would be a good time to propose the 2d question to be debated, namely,—If two men have each 10 acres of land, and one sows two acres of turnips and the other sows none—will the former, by the help of the additional manure arising from the turnip-feeding, have as much or more off his 8 remaining acres than the latter would have off the whole 10 acres? In order to explain the matter more clearly, the Chairman pointed out that, if they both followed the 4-course rotation, the turnip sower would have only 2 acres under potatoes, and he that sowed none would have 2½ acres, which would be indifferently manured; and the question, therefore, might be said to be narrowed into the consideration of whether 2 acres of land, well manured, or 2½ acres, badly manured, will yield the most potatoes, because the following crops would feel the strength of the manure just in the same proportion.

Mr MURPHY.—I don't think there can be any doubt whatever on the subject—the produce depends on the manure. In Dublin, where manure can be got in any quantity, an Irish acre will yield 25 tons of potatoes, which is more than 2 or perhaps 3 acres would yield if badly manured, and therefore the farmer with the 2 acres of turnips would undoubtedly have more potatoes, and more crop, and have the turnips to boot; besides, the statement assumed that the man who sowed no turnips would nevertheless be able to manure the 1-4th of his land, which he never could do.

Mr M'KEAN, of Ballyharidan.—I do not see how it is possible to manure as much land for potatoes without turnip culture as you can do with it. I have 200 acres of land, and I grew this year 25 acres of potatoes, and 19 acres of turnips; and if I had not this quantity of the latter I could not have the 25 acres of the former.

The CHAIRMAN. The proportion cultivated by Mr M'Kean comes very near the 1-10th of his farm, which is the proportion recommended by his Lordship. He then gave us a toast—

“Green crops, and house-feeding.”

CHAIRMAN.—I may here take the opportunity of stating what appears to me of considerable importance to the house-feeder. You all know that Cobbett insists upon it that a rood of ground will feed a cow well during the year. This he makes out by filling the ground with a succession of cabbages in the early part of the Summer, and afterwards by transplanting Swedish turnips; but I have never been able to get the Swedes to grow to any good size after transplanting, and it is only lately that I have been told of a method by which they are sure to succeed, and that is by transplanting them when the bulbs are about the size of a walnut or small egg, and nipping off the half, or thereabouts, of the tap root. In proof of this I was shewed in Devonshire Swedish turnips that had been transplanted, in this manner, into early potatoe-ground, and they grew as large as any grown from the seed without transplanting. This practice would facilitate the growth of additional green food very much. I wish also to mention that the yellow globe mangel wurtzel seems to me well worthy cultivation, and I intend to get the seed next season for such as I wish to try it. I have now to report that the Siberian heracleum<sup>3</sup>, of which I spoke at last meeting, has proved itself an excellent plant for early green-feeding, and for abundant produce, and I expect to have a large number of plants to give out after this year.—(Appendix, No. 11.)

Mr MURPHY.—I can speak most favourably of the yellow globe mangel wurtzel, and quite agree with Mr Blacker in recommending it. The leaves are exceedingly valuable in the fall of the year, when clover begins to fail, and it has the additional advantage that it may be grown in a seed-bed and transplanted like cabbage. I have seen a crop at Merino, cultivated by Lord Charlemont's gardener, and the transplanted crop was better than what had not been transplanted. In regard to the transplanting Swedish turnips they will succeed in moist weather, without cutting off any part of the tap root, but they must be left nearly entirely out of the ground, and only a small portion of the root covered; and care must be taken not to double up the root.

The CHAIRMAN here addressed Mr Smith and requested him to detail an experiment he understood he had made in regard to house-feeding cattle, which that Gentleman immediately complied with.

Mr SMITH said:—I had a dairy of twenty cows, in the Summer of 1841, consisting of part Ayrshire breed, and part a cross from Ayrshire cows and a short-horned bull; I had them separated into two lots of 10 each, selected to be as equal as possible, in point of carcase, condition, and milking quality. The one lot was, about the beginning of May, put to pasture in the usual manner, going to the field about 7 in the morning, after having been milked, again being brought home to be milked at 1 o'clock, and again being driven out at 2 o'clock to the field; at 7 in the evening again being brought home to be milked, and remaining in the house all night, having some turnips and straw, during the first few weeks, and thereafter cut grass. Towards midsummer they were put out all night, and kept in the house from 12 till 4, getting cut grass, vetches, and a little straw, and from 1st September, being again kept in all night, getting cut grass, vetches. The cows of the other lot were tied up in a wooden house, erected for the purpose, in a field of sown grass, from which they were to be fed near a field of vetches. The byre was constructed to hold five cows at each end, with boards to open in front of each cow, to let the grass be put into their

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<sup>3</sup> *Heracleum sibiricum*, also known as Siberian cow parsnip. Native to Europe and western Asia, including western Siberia and Mongolia. An umbellifer, similar in appearance to, and related to, common hogweed. This reference is strange - the sap can cause blistering in humans and animals when exposed to sunlight and its use as fodder is known to give an unpleasant taint to milk.

stalls, and to admit an abundance of fresh air during the day. There was a large tun or cask sunk in the ground outside the house, to receive the urine flowing from the cows; near this tank the dung from the cows was placed in layers on the face of the ground, and the water was occasionally taken from the tank in buckets, and thrown over the dung, to keep it moist, and to promote its decomposition, channels being in the ground round the dung heap, to conduct such fluid as might flow from the heap into the tank. The cow water being so repeatedly passed through the dung heap, whilst it promoted its conversion to well-made manure became itself enriched and was in a fit state for being applied to the surface of the ground, as a liquid manure. These cows were fed with cut grass from the field, in which the house was placed, and, towards the latter part of the season, with a proportion of vetches, cut from an adjoining field. About one fourth part of the labour of a man was sufficient for cutting and carrying the grass, and with the aid of a pony and a cart, when the place from which he had to carry the food became distant. He also supplied the cows with straw and water, and carried out the dung, and he dressed the cows over, once a day, with a whalebone brush. The cows were never removed from their stakes from the time they were put up, till the 1st of Nov., when they were taken back to the dairy, to be tied up for the Winter, with the other cows, excepting when they had to be taken to receive the bull. It required some care on the part of the keeper, to observe when they came into condition for that process. The cows thus treated were milked three times a day, as the others were; they gave their milk more uniformly, and more plentifully, and continued throughout in excellent health, and improved in condition from 30s. to 40s. per head over at pasture.— When removed to the dairy they still continued in excellent health and condition during the Winter, and had their calves in Spring, in proper time, and of large and healthy frame. The manure made was of value, considerably above the extra charge for management; and the cows were kept in Summer on  $\frac{3}{4}$  of a statute acre each. Those on pasture required fully  $1\frac{1}{4}$  acre of pasture, and nearly  $\frac{1}{4}$  acre for cut grass and vetches, so that, upon the whole, about one half of the extent of ground necessary for the Summer keep of cows, at pasture, was sufficient for those kept in the house. This mode of keeping cows will be found peculiarly beneficial on small farms.

Mr KINMONTH.—I am in the habit of house-feeding my cattle, and I always get the first price going for butter; but I think cows fed chiefly on turnips will give butter a disagreeable taste, although a little saltpetre will lessen it in some degree.

The CHAIRMAN mentioned that the taste given to the butter by turnip-feeding might be entirely avoided by churning often. That the milk gets soon rancid when the cattle are fed on turnips, and this was the reason; but by using the small French churn which he had introduced last year, the smallest quantity of milk could be churned, and the butter made in Winter was equally good as in Summer.

Mr Ross.—In corroboration of what Mr Blacker has just stated I recollect, a year or two ago, breakfasting with him. The butter was so excellent I took some of it to the house of a gentleman whose lady was very particular in regard to her dairy. I contrived to have the butter I had brought introduced on the breakfast table, without any one being aware of it, and I was greatly amused at hearing the lady praise its sweetness, and saying she made it a point never to let her dairy cows taste a turnip.

The CHAIRMAN.—I have now, Gentlemen, to call your attention to the 3d, 4th, 5th, and 6th subjects for discussion, which are so blended together that it is scarcely possible to consider them separately. I shall, therefore, leave it to the speakers to refer to all or each, as may suit their arguments and shall merely read them over, viz.

III.—What is the proportion of flax that can be grown upon any farm for the permanent advantage of the farmer?

IV.—What price, per stone, according to the average yield, will pay the farmer as well as oats, according to the rate of 9d. per stone, an average yield?

V.—What price for flax, per stone, will repay the farmer for being obliged to keep one cow less, added to the loss of manured ground, the following season, from that cause?

VI.—What is the rotation which appears most likely to pay the cultivator of land in this neighbourhood best for a series of years?

Mr M'Kee, in reference to the 3d subject, considered that 8 acres on a farm of 60 acres was not too much to have in flax.

Mr ALEXANDER SMALL concurred with Mr M'Kee and said there could hardly be too much flax—that was the crop that paid the rent.

Mr KINMONTH—My opinion on the flax crop is, that I do not consider it more profitable than any other; if it is a good crop, it will certainly pay well, but if only a middling crop, it will be a loss, as the expenses attending it are very heavy. I kept an account of the sowing, preparing, &c., last year, which averaged from £2 19s. per bushel, only charging 10s. as landlord's rent, for the ground. If we add to this the expense of manure, &c., its proportion of a five-course rotation, at the lowest calculation, will be 14s. 6d. Taking an average crop of 12 stone, at 7s., the produce would be four pounds, four shillings, which would leave a very small profit. Although this calculation may appear low, there is more under than over it.

Mr FERGUSON said:—In answer to Mr Greer, as to the quantity of flax that should be grown on a farm for the permanent advantage of the farmer, I consider the one-fifth quite too much; for if a person following the five-course rotation would sow the one-fifth of his ground in flax, he would not be able to raise as much manure on the farm as would carry on the system. Therefore, taking into consideration the expense attending the cultivation of flax, amounting to nearly the one-third of an average crop, I consider the one-tenth quite enough to have in flax, especially if the cultivator lives in a district of the country which does not produce flax of the *very finest* quality; for, Sir, there are districts in this neighbourhood, owing to the cultivation of the land, and quality of the soil, where the growth of flax, to the profit of the cultivator, is altogether out of the question, and the sooner such cultivators are out of the trade the better. In regard to the best rotation of crops, there appears to be three rotations of farming considered profitable in this neighbourhood, viz., the four, the five, and the six-course rotations. I consider the five-course shift to be the best, and my reasons for doing so are, that the most of the objections that are met with in the four and six-course shifts, are obviated, while the five-course embraces the advantages of either. My objections to the four-course are, that it does not afford the same facility for rearing cattle that the five-course does; nor is the grain crop as sure on the clover lea as on the lea of the five-course. My objections to the six-course are—that either you must have two scourging crops in succession, which will impoverish the land, or else have too much land under pasture to be in this part of the country, so that the advantages of the five-course over the four, are, in my opinion, as I have already said, that of rearing young stock, and, also, of having a better chance for a hit in grain and flax, which, as far as my observations have went, fully compensates, at least to the farmer who holds any considerable quantity of land (say 30 acres or upwards), for what he may want in the *breadth* of manured land or grain crop. The advantages of the five over the six-course are, that the farmer will not have two scourging crops in

succession; and, by the quantity of manure he will be able to raise, he will keep his farm in better condition, and Winter feed his stock much better, which is a material point.

Mr M'KEAN.—I shall give you, in as few words as I can, my opinion upon all the subjects stated for discussion, in their order. First,—I think the arrangement requiring one-tenth of the arable part of the farm to be in turnips is well adapted to the general circumstances of farms in this country. Slightly modified, from difference of locality, that proportion will give a good supply of Winter green food for stock, and, with a proper proportion of clover and vetches for Summer, will produce, with good management, quite a sufficient supply of manure for one-fourth or one-fifth of a farm: say, on a farm of 49 acres, four acres of turnips, and five or six of potatoes. I think, on farms at a distance from towns, these proportions should be reversed. Second,—I have no doubt that a person sowing 2 acres out of 10 with turnips, can have more produce from his remaining eight than a person not sowing any can have off his ten acres, unless he has some extraneous way of procuring manure. Third,—I am quite convinced that flax, like clover, requires a considerable interval to elapse between the crops; and I think any farmer sowing flax more frequently than at intervals of nine or ten years will have cause to regret it. Fourth,—Mr Small's data seem to me to be well founded, and that 8s. 3d per stone, for flax, is a near approximation in value to 9d. a stone for oats. Fifth,—I have no means of making a correct calculation. Sixth,—Having a farm of medium quality, part heavy soil, and part light, I annex the rotation I follow for each, and which of course, I think the best:

<i>Heavy Soil</i>	<i>Light Soil</i>
1 Turnips.	1 Turnips.
2 Barley.	2 Barley; perhaps flax might be sown with advantage
3 Clover.	3 Clover and grasses.
4 Oats.	4 Do. In grazing.
5 Potatoes.	5 Oats.
6 Wheat.	6 Potatoes.
7 Vetches or Oats.	7 Wheat.
After the vetches, I sometimes take flax, and sometimes wheat, which throws that field into an eight-course	8 Flax or oats.
	As I have no permanent meadow, I prefer, generally, oats to flax, for sake of the fodder

In the above rotation, taking oats after wheat is an exception to the general rule of not taking two corn crops in succession; but experience has proved that we may expect a good crop of wheat and oats after well manured potatoes. Seventh,—I have not myself tried any of the new manures. Eighth,—I have little experience in the use of liquid manure applied directly to land. I am about to make preparation for extensive use of it on my clover this year. Ninth,—The best method of making prime butter is, first, rich food to the cows; second, perfect cleanliness of the dairy utensils; third, not keeping the cream too long before churning; fourth, not using too much salt; fifth, clearing the butter of all impurities of the buttermilk, and water with which it is washed; and, sixth, packing it in good, well-scalded casks.

Mr NATHANIEL GREER said he had found one-fifth part in flax pay him well, as yet.

The CHAIRMAN.—It is not extraordinary that such variety of opinions prevail among farmers on the points under discussion because they must be guided very much by the quality of the lands they occupy. But there is one principle that it is necessary to be guided by in all farms, and that

is, to keep the land in good heart. To do this, it appears to me necessary to keep a cow for every three acres of arable land; though, if more attention was paid to the liquid manure, perhaps one cow to every four acres might do. But, to take things as they are, the manure of a cow will not do more than cover three roods, which is the one fourth part of three acres, and ought to be well manured according to the four-course rotation: this proportion is also recommended by this circumstance, that the milk and butter of a cow will pay the rent of three acres, and leave the produce of the crop for the use of the farmer and his family; and, as the duty on foreign butter remains as it has been, whilst a diminution has taken place on every other farm produce, to keep up this proportion of stock becomes the more important. If therefore, so much flax is sown as to prevent the keeping of a cow for every three acres, the land seems likely not to be well manured, which militates against the generally admitted principle of keeping the land in heart; and if more than 1-10th is put in flax, I don't see how a cow for every three acres can be kept. This applies to subject No. 3. Now, as to No. 4, it appears, by Mr Kinmonth and Mr Thomas Ferguson, that upon a series of years the flax crop does not pay better than any other at the acreage rate of price and produce, which they consider can't be rated higher than 6s. 6d. to 7s. per stone, at 24 stones to the acre. Now Mr Small himself, the great advocate for flax, admits that oats at 9d. per stone is as good as flax at 8s. 3d. per stone—(see Appendix, No. 2)—and as 9d. is not above the *acreage annual* price of oats, *though higher than at present*, this would make Mr Small to differ very little from what Mr Kinmonth and Mr Ferguson have stated, that **flax is not the remunerating crop it is thought to be**. This seems to bear very forcibly on the subject under discussion, and other calculations correspond very much with these. We thus come to consider the price of flax that would compensate for the loss of a cow, and the loss of the crop that the manure would have yielded the following year. Mr Murray has kept an exact account of the produce of a cow of his, from September to September, which amounts to £10 9s. 7d., without counting the milk he used in his family, nor the value of the manure. The whole, therefore, may be moderately estimated at £13, and the account may be depended on as perfectly accurate; and the cow being a very small one, this produce is, I believe, much under the calculations of the benefit of a cow usually made. Supposing this, however, to be correct, and that Mr Small is right in his calculation, that a flax crop at 8s. 3d. per stone is equal to an oat crop at 9d per stone—(see Appendix, No. 2)—then it follows clearly that, allowing the flax to be sold at 8s. 3d., which is above the average, and the oat crop at the present lowest price of 7d. per stone, there would only be a gain on the flax crop of 20s. per acre. Now, his Lordship admits of one-tenth of the land being in flax, and suppose that, by putting in two-tenths or one-fifth of flax, one cow less is kept, that would admit of only one cow for six acres, in place of two, then the result would be, the farmer would have about 24 roods more flax, the profit on which, as compared with oats, would be only 12s. 6d, according to the statement of Mr Small, and he would lose £13, the annual value of a cow, besides the crops which the extra manure would afford afterwards; and supposing he lost the cow for only part of the year, still the balance would be against the flax. From the foregoing data I should consider the best rotation for the farmer in this country would be—for a 10 acres farm, potatoes, 2 acres; grain laid down with seeds, 2 acres; clover for cutting, 2 acres; grain after clover, 2 acres; and the remaining 2 acres, one-half flax, and the other half turnips. By this means you would get your flax at the end of the rotation, which ensures the ground being manured for potatoes the following year, along with the turnip ground, which part (the turnip ground) would yield a double crop. The clover ought to be top-dressed with liquid manure, which would make it rich enough to yield the crop of grain and flax, and by alternating the flax and turnips they would return to the same ground only once in 10 years, The difference of soils, however, is so great that no fixed rule can be laid down, and his Lordship has wisely left the selection open to the judgment of the farmer himself. The

general opinion of the company seemed to be, that there was no gain to be made on the average of years by growing flax to sell at 8s. 3d. per stone—that a higher price might leave a profit, and compensate for the loss the following year; but that no price that could reasonably be expected would repay the farmer for losing the keep of a cow, or letting his land get out of heart. The truth of this may be shown in another way—for example, the spirit of gambling is such that people are always to be found who will give the very highest value for potatoe land to sow flax upon, perhaps £5 or £6 an acre, when they would not give more than 50s. or £3 for the same land to sow oats. This would shew a higher estimate of the flax crop even than Mr Small makes it; the loss of the keep of a cow would overbalance the difference, as well as every other calculation.

The CHAIRMAN then gave—

"Success to improved Agriculture according to whatever rotation is best suited to the soil"

This toast having been drank, the CHAIRMAN called on Mr Kinmonth to state the results he had observed from the use of liquid manure, of which he had had more experience than any other present.

Mr KINMONTH.—It is nearly 20 years since I first commenced using liquid manure, on grasslands. I have a large tank, 30 feet by 10, and 3 feet in depth, into which all the urine from the cattle-sheds, &c., runs. I have a large barrel with which I carry it out to the field. Attached to the cart is a small trough, full of holes, such as is used for watering the streets. It may, also, be used to advantage by being mixed with compost, by frequent waterings, or putting it into the cistern for a week. When taken out, made up into a heap, for some time, I have found it useful in top-dressing, and good for the turnip crop. The urine of six cows, fed on turnips in Winter, will enrich a quantity of earth sufficient to top-dress an English acre of grass land. It would require about five pounds' worth of manure to perform the same operation. The advantage of irrigating grass-land with urine, I have proved on a small piece of ground sown with Italian grass, convenient to the cistern, which I cut four times in one season, each cutting averaging four feet. I would recommend farmers to make a trial of it. The expense of making the cistern convenient to the cow sheds is but trifling: it should be situated, also, where the slops from the house would run into it. They will be more benefitted by pursuing this plan than allowing such a quantity of valuable manure to be lost.

Mr FERGUSON—I have this last year made an experiment with flax water, by applying it to my turnip crop, which had every appearance of becoming a complete failure, but, after the application of the flax water, the crop immediately assumed a healthy appearance, and I have had a very good crop, which I entirely attribute to the flax water, which is by no means so troublesome to apply as people would suppose. I got a water cart and had two spouts to direct the liquid upon the drills, and the thing was finished very quickly, and I am determined not to lose so valuable a species of manure hereafter, and the neighbours, who laughed at me when using it, I believe now think as highly of it as I do.

CHAIRMAN.—I have a letter from Mrs. Gilbert, of Eastbourne, on the subject—a lady who has rendered most valuable service to the cause of agriculture, and to increasing the comforts of the working population around her, by giving allotments of land for spade cultivation. She states that one of her small tenants said he would rather pay 20s. an acre for her land, with a tank for liquid manure, than have it for nothing without it. The letter shall be added to the report for your perusal. I fear, however, these discussions, however important they may be, will appear tedious, if not a little diversified. We have several strangers here who have honored us with their company on this occasion, representing so many different classes in society that it would not

be fair to unite them in one toast. It is seldom that a Member of Parliament honors us with his company; and, therefore, I propose to commence by drinking “The health of David R. Ross, Esq., M.P. for Belfast,” a town not less distinguished by the extent of its trade and manufactures than by the high sense of honor and integrity evinced by its inhabitants in all their mercantile transactions

Mr Ross returned thanks to a very eloquent address, in which he complimented the meeting upon its importance, and the good results that must follow such discussions as he had that night heard, and expressed his pride and satisfaction at having been chosen to represent a constituency which, for commercial spirit, high moral feeling, and general intelligence, was second to none in the United Kingdom.

CHAIRMAN.—I have now to propose the health of Mr Smith, of Deanston, and, in doing so, I cannot help regretting that such services as he has rendered to the public should be passed over undistinguished by either honors or emoluments. The conquerors of towns or countries, that perhaps it might have been better never to have entered, are rewarded with Peerages and pensions, whilst the man who has earned a bloodless victory over the stubborn soil of the United Kingdom, and conferred inestimable benefits upon its inhabitants, is left without any national honor or reward. In France, I stayed some days with a gentleman, not far from Nantes, who had been made a member of the Legion of Honour merely for having reclaimed about 1,000 acres of unprofitable land in that neighbourhood; but the case here is different. Let us, however, Gentlemen, shew our sense of his merits by drinking his health. This having being done, with three times three,

Mr SMITH returned thanks and said **there was no country he had yet seen that would be more improved by draining and subsoiling than Ireland.** It was a great satisfaction to him to think that he had been able to be, in any way, instrumental in the introduction of these improvements. He could not say that he was insensible to public honors or emoluments, but he could say that he was quite content with the reward he received in the flattering reception he had always met with from his fellow countrymen at such meetings as the present. He was greatly gratified by observing the spirit of improvement that was apparent among them and strongly urged the advantage of cultivating green crops still more largely than they had yet appeared to have done.

CHAIRMAN.—We have now paid to Mr Ross and Mr Smith the compliment of drinking their healths; but what signifies the wisdom of the Senator, or the merits of the improver, if the arguments of the one and the improvements of the other are not made known to the public. I, therefore, propose as a toast, “The health of Mr Murphy,” who is not only a practical agriculturist, but, also, the Editor of The Farmers’ Gazette, the best farmers’ Journal which Ireland ever possessed.

Mr MURPHY returned thanks and complimented the meeting upon the great utility of these discussions and regretted that every farmer in the country was not present to hear them. **He had often heard of the Markethill meeting** and must confess it fully came up to his highest expectations. The statements made had fully satisfied him that the exertions of their excellent Chairman—exertions which had worthily obtained for him the esteem and gratitude of every well-wisher of his country—had been crowned with success. He hoped to have the additional pleasure, to-morrow, of looking over the scene in the neighbourhood of Mr Blacker’s labours; and it would be his duty, as it certainly would be his pleasure, to endeavour to apply the means at his disposal for holding up for emulation to the other parts of the country, the exertions in improved husbandry which he doubted not he should find in operation in this favoured district.

**He had long desired to be present at one of the Markethill Anniversary Dinners, for he had always ascribed to them a very principal part in giving the first impulse to the agricultural improvement of the country,** which at present engrosses so much public attention, and although kindly invited, it had not before been in his power to do himself that pleasure. He well recollected observing, some ten years since, the notice of the first of these meetings in *The Newry Telegraph*, and of being impressed with the importance to the country of the well-authenticated statements there made. He had copied the proceedings at length into *The Irish Farmer's and Gardener's Magazine*, which he then, and for short time after, continued to conduct, and which had a circulation of 2,000 copies, and he, therefore, took to himself credit for having, in some degree at least, assisted in the diffusion of the information brought forward at that meeting, and which had, in his opinion, effected the great object which he had above ascribed to it. And it would again, on this occasion, be his privilege to assist in effecting the object proposed in these meetings—the agricultural prosperity of Ireland.

CHAIRMAN.—I have just alluded to the assistance of the Press in disseminating every kind of valuable information: but what would be the good of spreading information, however important it might be, if there were no practical men to give the public the benefit of it? I therefore call on you, Gentlemen, to drink the health of my friend, Mr Burnett, one of the best agriculturists in Scotland—a person so noted that even Scotch farmers, who are sought after so extensively to instruct others, send their sons to his farm to be by him. I beg to unite in this toast, the health of Mr M'Kean, Mr Clarke, Mr Kinmonth, Mr Greer, and other practical farmers who have honored us with their company this day.

Mr BURNETT returned thanks and said he had purposely come from Scotland to attend this meeting, and, notwithstanding the long journey and severity of the season, he was highly gratified by having so done.

In conversation with Mr Burnett afterwards, he said the hour was so late he did not like to enter into any details of his own farm and management, but expressed himself as follows:—"I think I said that when I first began to farm I could only raise from 5 to 6 acres of green crop, and that in seven years I could now manure, from my own resources, fully 30 acres, and keep three times the number of cattle, and in better condition than I could formerly. I could not attempt to raise green crops without draining and subsoil-ploughing, and I have subsoil-ploughed this last Autumn about 33 imperial acres, at a depth of 17 inches, so that my land, which formerly produced nothing but poor oats and miserable pasture, now produces from 40 to 50 bushels wheat per imperial acre, and as good turnips as any in the Kingdom. I think I also mentioned that the proportion of green crop to the whole farm ought to be a fourth or fifth.

Mr Ross here begged to propose the health of their Chairman, W. Blacker, Esq., which he did in very complimentary terms to that Gentleman, for the service he had rendered, not only in this neighbourhood, but by **exciting a spirit of agricultural improvement throughout the Kingdom.**

The CHAIRMAN, having returned thanks, proceeded to say:—I do not wish to take up your valuable time by any vain attempt to explain my feelings. I prefer attempting to interest you by some account of what is doing for the improvement of agriculture elsewhere, hoping it may have the effect of increasing the exertions making here. Being recommended to go to Strathpiffer Spa, in the Highlands, I had the pleasure of making the acquaintance, on my way there, of our guest, Mr Burnett, of Gadgirth, who is one of the best farmers in Scotland, and, also, of Mr Turnbull, a celebrated chemist in Glasgow. Both these gentlemen have been kind enough to give

me detailed accounts of their experiments with new manures, which, I think, will prove rather interesting, and shall be attached to the report of the meeting. (See Appendix, No. 13.) I was afterwards fortunate enough to make the acquaintance of Mr M’Kinnon, of Corry, in the Isle of Skye, the intelligent Agent of the Lord MacDonald, who I found reading the small pamphlet I formerly addressed to the tenants on this estate, in the public room of the hotel at Strathpiffer. This gentleman told me he had lately commenced, in the Isle of Skye, to teach the Highlanders their improved cultivation, by means of procuring an agriculturist to instruct them, without having been aware of any such attempt having been made elsewhere. His opinion entirely coincided with mine, that by teaching the inhabitants to cultivate their lands in this manner, they would be able to live in comfort, and pay a higher rent than the land could produce if turned to sheep farming; and the people themselves were so sensible of the plan being intended for their benefit, that they did everything willingly as they were desired, and some of them said to him, “it was a pity he had not made them do this twenty years ago.” I annex the account of his first proceedings; and if this plan succeeds, which I am confident it will, wherever there is any considerable proportion of arable land, I cannot help remarking what an amount of human misery might have been avoided in the depopulated lands of the Highlands, with absolute profit to the landed proprietors. A very few years will prove or disprove the truth of this assertion; and I look forward, with the greatest interest, to the results of Mr M’Kinnon’s exertions, which, if successful, I have no doubt will be the means of very generally introducing the system into the Western Highlands of Scotland, where agriculture is perhaps farther back than it is, generally, in Ireland. From Strathpiffer I proceeded shortly after to pay a visit to Lady Bassett<sup>4</sup>, at Tehidy Park, near Truro, in Cornwall, who, being anxious to improve the cultivation of the small farms possessed by the Cornish miners, had requested me to procure her an agriculturist, determining to make trial of the plan I had adopted here. I confess I have taken the greatest possible interest in her Ladyship’s experiment, there being, perhaps, a little personal feeling mixed up with the satisfaction I might naturally feel at its success. For I had last year taken the liberty to lay before the Royal Agricultural Society of England the success attending the appointment of an agriculturist in the Union Agricultural Society of Ballinasloe, and urged the adoption of the same plan in those parts of Great Britain which stood in need of improvement. His Grace the Duke of Richmond was kind enough to bring forward the matter for consideration, but the answer given by the Council was this—“That they were very glad to hear the appointment had been of use in Ireland, but it would not at all answer in England.” It was, therefore, with great satisfaction I found the justice of my recommendation had been fully proved by the remarkable success which had attended Mr Peters, her Ladyship’s agriculturist, whose report will be read with intense interest, if am not much mistaken, in every part of the United Kingdom. It will from it appear that he is gradually rising in the estimation of high and low; that he has already introduced many improvements, such as drilling the green crops, ploughing without a driver<sup>5</sup>, and many other important changes; and, I have no doubt, ere long he will be the means of effecting an entire change in the agriculture of the country. Nor will the effect of his appointment be only felt in Cornwall, for a gentleman of property in Gloucestershire, having been struck with the advantage of the system during a visit to Lady Bassett, has adopted it at home with every prospect of similar success. But, Gentlemen, I have delayed you too long with distant details; let me bring my observations nearer home, and once more allude to Ballinasloe, and the success of Mr Clapperton, the agriculturist there, which, it must be admitted, has been

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<sup>4</sup> Frances Basset, 2nd Baroness Basset (1781–1855) of Tehidy Park, which is about 2 miles north of Camborne, close to the north Cornwall coast.

<sup>5</sup> A man leading the horses.

more rapid than anything the agriculturist has to boast of here. I hope you will remove this reflection from yourselves and me. It is true, **I have been unable to give much assistance to the agriculturist for these three last years**<sup>6</sup>, but I have done what I could. Lord Gosford has done everything on his part—has lent lime, seeds, money, and given instruction; can it be that the more that is done for the tenantry the less they will do for themselves—that they allow the Galway men to get before them? His Lordship has never taken advantage of any improvements made, though he might fairly and reasonably claim some share, but he has given leases for 21 years, and the tenant's life to everyone who has distinguished himself. I trust that I shall see increased emulation the ensuing year; but whilst I say this, I do not mean to deny that **there has been a greater improvement in agriculture in this neighbourhood within the last ten years than there was for half a century before**, or would probably have taken place for half a century to come; and this being my entire conviction, it is with great pleasure I propose, in conclusion, “The health of the industrious tenants on the Gosford and Drumbanagher Estates.”

This toast was responded to by Mr SMALL, who took occasion to allude to what an industrious tenant ought to be—namely that every industrious tenant ought to manage his business methodically—he should be guided by that golden rule for every business—“a place for everything, and everything in its place”; and “a time for everything, and everything in its time.” He would also avail himself of all the new improvements in agriculture, as far as his circumstances would admit—especially he must attend to those two essential points, furrow-draining and green-cropping; and if these things were attended to other requisite things would follow of course. He then alluded to the benefit of a resident landlord, and thanked Sir Robert Peel for having exempted them from the Income Tax—observing, that if Sir Robert had had the presence of mind just to have exempted the farmers from his Tariff and Corn-Bill, he would have hit the nail on the head; but as this had not occurred to him he hoped there would shortly be some friend of the farmer who would give a jog to his memory. He concluded, after some humorous remarks in the same strain, with expressing the thanks of the tenantry for the very handsome Challenge Cup which his Lordship had offered for competition, and finished by saying there was not a tenant on the estate who would not have gone without his dinner for a month to have had the pleasure of meeting his Lordship at the dinner here to-day.

Mr CROZIER CHRISTY, being called on to return thanks on the part of Colonel Close's tenants, said—That a great spirit of inquiry for knowledge had arisen in the Drumbanagher and Acton Estates, could not be denied; in proof of which he would beg leave to advance, that when he had the honor of responding to a toast at their last anniversary dinner, he intimated that **they, in the Drumbanagher and Acton estates, had, at the suggestion of worthy Chairman, organized a Farming Society**, and since that time Colonel Close had kindly consented to be President of their Society, and granted them a very liberal subscription annually. He has also ordered, for the Society, Monthly and Quarterly Periodicals, and a Weekly Paper, all written on Agriculture, for the purpose of diffusing the earliest and most authentic information that can be procured of all the improvements and experiments in agriculture. They, as a Society, have also gone to the expense of procuring dies for casting medals, as honorary premiums for the Society, which dies cost them 10 guineas; and they have, in addition to this, paid away in premiums, is the past Summer, for neat husbandry, green crops, improved breeds of cattle, &c., a very considerable sum in money. They had no less than 91 competitors for their premiums on the two estates; and he was happy to say that the formation of that Society was a great stimulus to renewed and

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<sup>6</sup> Blacker suffered from an unspecified debilitating illness for three years, during which time his Gosford Estate assistant William Wann deputised for him.

increased exertion on the part of the industrious tenants in that locality. In the name and on the behalf of the industrious tenants in the Drumbanagher and Acton estates, he (Mr Christy) begged leave to tender to them his sincere and grateful acknowledgments for the honor conferred on them by that large and highly respectable meeting.

The CHAIRMAN here called on Mr Small for his annual song, which will be found in the Appendix; it was received with the usual plaudits by the company.

“The health of Mr M’Kee, the Vice-President, and the Linen trade.”—“The town and trade of Markethill, and thanks to the Flax-buyers who had established the Flax Market.”—“The healths of Lord Acheson, and Mr Close, the heirs to the Gosford and Drumbanagher estates” were given in succession and ably responded to. In regard to the latter toast, the Chairman observed that Lord Acheson was well known and where known must be esteemed. As to Mr Close, he was still in his boyhood<sup>7</sup> and had yet to make a character with the public; but he was a boy in every way such as a mother’s heart could wish, or the fondest father desire, and no fears need be as to how he would turn out.

The CHAIRMAN here noticed the great benefits likely to arise to the community from the attention drawn to agriculture by the Royal Agricultural Society, and the improved management of the flax crop, by the exertions of the Flax Improvement Society, by means of which a superior article and greater fineness were to be attained. Without this being accomplished **it appeared, from the discussions of the evening, that little profit was to be derived from the crop.** In the fine qualities we had only to compete with the Belgians, who paid nearly as high rents and taxes as ourselves, and, if we used the same methods of improving the quality which they did, be had no doubt they would compete successfully; but the low price at which coarse flax could be imported from Russia would always render it an unprofitable crop, and would repay the Irish farmer under present circumstances. There was no man in Ireland who had given so much time, or taken so much trouble to render these useful and efficient as the Noble Lord who presided over each, with such credit to himself and advantage to the a large debt of gratitude was due to him by the public, and he therefore proposed “The health of the Marquis of Downshire, President of the Royal Irish Agricultural Improvement Society, and the Flax Improvement Society.”

Mr SMITH, of Deanston, said:—Having lately come from paying a short visit at Hillsborough, and having had an opportunity whilst there of going round his Lordship’s estate, he could not help availing himself of the opportunity to bear testimony to the great improvements there in progress, originating entirely in the impulse given by his Lordship’s personal exertions, which he had reason to say were not confined to his own estate, but were freely given to promote whatever could in any way benefit the country at large.

The CHAIRMAN next gave “The health of the Earl of Cancarty, and success to the Ballinasloe Union Agricultural Society, and all those which had been formed upon its model,” prefacing the toast by pointing out the advantages likely to accrue to the Kingdom by the general introduction throughout Ireland of the plan there pursued. It appeared from the last report of Mr Clapperton, the agriculturist, that 1,173 farmers had, in about 18 months, begun to change their mode of agriculture, and adopt a better system—of these nearly one-half were already become turnip-sowers, and the others were preparing to follow the example, and had commenced house-feeding on vetches, clover, mangel wurtzel, &c. It was easy to foresee the effect which would be

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<sup>7</sup> Maxwell Charles Close, born 1827, and then aged 15.

ultimately produced, if an equal number of converts were pursuing an improved system in the other 130 Unions into which Ireland was divided. It was quite evident that if every Union, in 18 months, possessed the same number of converts, the reign of ignorance would soon be at an end. He then noticed the continued success of the Rev. Wm. Eames, of Tyrrell's-pass<sup>8</sup>, who had the singular merit of having persuaded the farmers in his district to tax themselves for the payment of an agriculturist for their own instruction, and referred to his report in the appendix for an account of his proceedings.

This toast having been drank, the CHAIRMAN said the lateness of the hour (past 12 o'clock) compelled him with great regret to propose their parting toast. Much interesting matter intended for discussion had not been touched upon, in particular the making of butter according to the Dutch method by copying which a much higher price would be obtained. There was, likewise, the important question, when ought the farmer's year to begin? which had not been touched upon. In this respect he would only say, that in his opinion as fast as one crop could be separated from the soil the preparation for another ought forthwith to commence. He then requested Mr McEwen, a person engaged in the butter trade, to attend next morning, to adjudge the premiums for best butter, and to explain to those who attended the proper method to be taken in order to command the highest price. He then gave the concluding toast,

"Success to our next Annual Meeting,"

and in the course of a few minutes the room was empty, everyone departing in the most orderly manner, gratified in the highest degree by the entertainment, and improved by the information which had been so freely communicated.

It seems impossible that ignorance can long maintain its hold over small occupiers of land when they hear farmers whom they look up to, such as Mr M'Kean, Mr Kinmonth, and others, telling them they are wrong, and shewing by their own practice that they are telling them the truth. The great wonder is, that they have been able to shut their eyes to what is visible to everyone and that they are not led to consider that the land which is now absolutely unprofitable, if properly manured would yield enough to pay their entire rent. Lord Gosford has offered to lend all these people as much manure, either in bone dust or guano, as will give them as many turnips as will produce as much manure for the future as they could possibly desire, if they will only take care of it, and blind must the men be to their own interest that do not avail themselves of the offer.

On the following morning Mr Blacker, accompanied by Mr M'Ewen, proceeded to inspect the samples of butter. Mr M'Ewen pointed out where the butter was injured, by having coarse, unmixed salt, and said half an ounce to the pound of butter was quite enough. He also pointed out the milk and water bubbling up as he moved the fryer(?), which he said prevented the article keeping, the butter growing rancid, and getting a bad smell when kept in warehouses, and stored up in steamers; that some of the butter was equal to any Dutch butter, if these things had been attended to. Mr Blacker mentioned that fine salt was produced by quick evaporation, and if they would boil down the coarse salt in a saucepan until it came to a thick consistency and then dry it up by the heat of the fire, the salt would be as fine as hair-powder.

1st prize—A handsome French Churn, was gained by Mrs Gillilan.

2d ditto—A Potatoe Washer, was gained by Mrs. Beaty.

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<sup>8</sup> In Co Westmeath, about 50 miles west of Dublin.

Mr M'Ewen promised to attend every fair day and give more than the market price for any butter made according to his instructions.

I have to apologise for the length of this report, and more particularly for not being able to do more justice to the speakers and the information they gave. As to the first, I could scarcely give you any connected account of the meeting without following, as concisely as in my power, the order of the toasts; and great as the length may be to which the report has extended, it does not contain the one-twentieth part of what it would have been useful to press on the public attention.

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#### APPENDIX, NO. 1.

*Speech of T. Tilly, Esq., Chairman of the Cornwall Agricultural Association, showing the reception Mr Peters, Lady Bassett's Scotch Agriculturist, met with in that County, taken from The Cornwall Royal Gazette of Dec. 16, 1842:*

"The CHAIRMAN next proposed 'the Highland Society' and, with great pleasure, coupled with it the health of a Scotch gentleman now in the room, Mr Peters—(cheers)—who had been brought down for the purpose of teaching them the science of agriculture as practised in his own country. He (the Chairman) trusted no long time would elapse before he should see the progress of the works at Tehidy under Mr Peters' superintendence. He was sure these works would be eminently beneficial to Lady Bassett, and to the County. He had lately an opportunity of speaking to one or two of Lady Bassett's tenants. One of them told him he had rented, for some time, an estate from her Ladyship. He was a young man, striving to get on, and worked as well as he could according to the old system. He had an interview with Mr Peters, who laid out a plan which altered almost the whole course of crops on his estate; and it was capable of easy demonstration that that course rendered the estate, at the end of 12 months, a much better estate than before. 'That was the sort of information they wanted. (Cheers.) And, as a Cornishman, from near the Landsend, he had much pleasure in welcoming here, an instructor from the Ultima Thule<sup>9</sup>. (Cheers.)"

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#### *Mr Peters' Reports to Lady Bassett*

Bennetts, 8th June, 1842

MY LADY,—I received your Ladyship's note of the 6th and am pleased to learn that Grant is likely to answer. I hope everything goes on satisfactorily there. It affords me gratification to notice the state of the tenants here. Colville's Swede turnips are sown, and his ground ready for the rest. Steers, of Upper Wadfast's turnips are all sown. Veal's, of Oke, will be *partly* put in this afternoon, and Cole's tomorrow. Steers of Upper Wadfast, is busy preparing his ground. They have all shewn an activity quite beyond my expectation; but, owing to the late working of the ground, I am afraid they shall have no braird<sup>10</sup> till it rains. If I am not particularly required West, I think my presence may be desirable here for these few days, say till Monday, to push them on.

Our operations here are now attracting much attention in the neighbourhood, as Mr Shean will, no doubt, inform your Ladyship. The expression of the meeting at Stratton was most decidedly

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<sup>9</sup> A mythical place in ancient geography, representing the furthest known point in the northern regions.

<sup>10</sup> An old Scots term meaning the first emerging shoots of grass.

in favour of the introduction of a resident practical agriculturist into the district; and I am satisfied that our tile work will not be able to supply one-tenth of the demand before two years.

Head gets on very well. Mr Benson, the Duke of Bedford's steward, at Annesley Cottage, called upon me yesterday. He is much pleased with the tiles; and, being a Cumberland man, his opinion is founded on experience.

While I feel ashamed, on my own account, at the kind attention shewn me by the gentlemen of the neighbourhood, I am much gratified to think that now your Ladyship's exertions seem to be duly appreciated.

I shall write to my wife, and direct that in anything they may not comprehend they apply directly to your Ladyship.

I hope Paul has got in all the turnips at Menwinnion and is now actively engaged about the doors.—I am, my Lady, your obedient servant, JAMES PETERS.

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Bennetts, 30th July, 1842.

MY LADY,—From Nance's report to your Ladyship I was almost afraid to come here; but, as I stated in the note I wrote on his letter, I expected the turnips would improve, and I am now happy to say that they are far beyond my expectations. My only regret now is, that I was not here ten days sooner, as the turnips are overgrown, and the thinning either neglected or improperly done. I am glad I brought a dozen of hoes with me, as there is no such thing with any of the farmers, nor do they seem to know how to use them. They were all anxiously waiting my arrival, and my reception has been most enthusiastic and friendly. They have begun to do a little with an old horse-hoe that Mr Steers, of Lower Wadfast, had bought at a sale; and were also attempting to thin them with a tool call a *potatoe hacker*, very ill suited to the purpose, having a round edge. I have made arrangements to have a proper horse-hoe made on Monday, and I have promised them to remain for some days, to set them all a-going. I expect, by Wednesday, to have the fields all cleaned and thinned out.

Mr Colville's turnips are very good: with a trifling exception they are as good as mine at Ailgors. Steers's, of Upper Wadfast, are much overgrown for want of thinning. So are those at Lower Wadfast. Veal's, of Oke, being in stubborn land, are not so thick, and, having been worked, are doing well. Cole's, except a part that was put in late, are doing well, and much want thinning out: they are all further advanced than those at Menwinnion, on the home farm.

If further evidence had been required of the utility of having a person practically acquainted with the cultivation of green crops in a district, I have had it from my visit here just now, as, had I not come, the turnip crops would have been completely lost. Then would have come one of those untoward precedents—"The new plans have been tried in this country, but they will not answer." I have now no doubt as to the result of our experiment here, but I must not lose sight of them so long again, as upon due pulverization and management of the ground much will depend, and I find all eyes are upon us. Mr Nance had many invitations left from people who had been looking at the tile work, for me to call upon them when I came here, but I am afraid my time will not at present admit of such visits; among the rest, from the Miss Fans, the object of which I cannot comprehend.

We have eighteen acres of turnips on the farms we selected for our experiment, all properly put in; and I hope to be able, by Wednesday, to say properly worked. Upon all these farms, last year, there was about three and a half acres of turnips, put in the old way, and not all worth one acre of good turnips.

I expected Mr Shearon here today about the tile-kiln, there being now sufficient brick. The bricks are very good. I shall bring a specimen of them on my return. The Rev. Mr Heathcote has got about 900 tiles, but I think we must reserve what we make now for our own experiment. I find we could sell a great deal of them, once we can get a sufficient quantity made, which will not be for some time.

I should much like to have an experiment made before the Winter of the tile drain and subsoil plough; and I have Cole's consent, on a piece of ground I think suitable, and which he is to put to wheat.

The Spring crops are much improved since I was last here, but they will be late; and the wheat, where the land is wet, stands very thin. I am glad to find that Mr Reynolds has allowed John Nance to act upon my plans regard to the improvement in the farm buildings at Wadfast as in this they much want an example of what is good.

I hope to be home in time to direct the masons at the Park, as your Ladyship knows I do not want any other person to interfere with the arrangement agreed upon there.—I am, my Lady, your most obedient servant, JAMES PETERS

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Mr Peters' Report to Mr Blacker.

Tehidy Park, 10th Dec., 1842

SIR,—After another year's experience I am happy to have the honor of reporting to you the satisfactory manner in which improvements proceed in this neighbourhood. Lady Bassett's exertions are likely in a few years to be crowned with complete success, if I may be allowed to judge from what has taken place since I came here. I reported to you last year the state I then found agriculture in, and although that report was not altogether pleasing to some, yet I believe none can deny its correctness. The state of matters is now materially different; there exists a thorough conviction, generally, of the error of the former system, and a desire to follow a better, as its details are being developed by the practice of those who have adopted it. In the department of ploughing, an astonishing revolution has been effected. Instead of "deep ploughing won't do in this country," and the premium being withdrawn from the competitors, who ploughed "too deep for this country," as was the case at the ploughing-match reported by me last year, the depth this season was, by unanimous consent, fixed at six inches, with a proportional breadth; and instead of the ploughmen, with one exception (the Scotchman), having drivers, the greater number had their horses properly yoked abreast, with reins and no driver, and what was certainly not a little gratifying to me, the son of the late tenant of Park, mentioned last year as declaring he would rather leave the country than plough without a driver, this year most deservedly gained the first prize, although there was a Scotch ploughman in the field, the work on the whole being very creditable.

The turnip husbandry and house-feeding is fast succeeding the croft and fence side system of keeping stock. I need only call to your recollection the statement made by Mr Hockin at the meeting, when you were at Tehidy, "that there were more turnips grown by the cottagers, within

the last two years, *than were grown in the whole Parish of Illogan*<sup>11</sup> five years ago.” The regular drilling and cultivation of these crops are now, in many cases, commendable.

The number of cottagers that have cultivated turnips this year is much increased. Lady Bassett has advanced bone dust, on credit, to 59 of the cottage tenantry, besides to numbers of the larger farmers, which has been applied for turnips. This manure has here obtained a decided preference over every other that has been tried. I have strongly recommended a practice I had acted upon with much success before, that is, a mixture of coal ashes, that have been steeped in liquid manure for some time, in the proportion of one bushel of ashes to two of bone dust, from ten to fifteen bushels of bone dust, with the above proportion of prepared ashes per acre, being quite for raising a superior crop of turnips on most land. Turf ashes, if kept dry, and mixed with the bone dust, also answer very well. It is evident that in the case of the coal ashes, the principle so clearly laid down in Professor Gregory’s letter, read at the Markethill dinner last year, of the carbon in the ashes fixing the ammonia in the liquid manure, is what produces this good result.

These manures appear to me to be invaluable, as a first means of introducing the cultivation of turnips amongst cottagers, the little weight of carriage, and the facility with which they can be applied, allows time for properly working the land, where **spade husbandry** is desirable, such as on steep declivities, and in many situations where other manures cannot be got, these would lay the foundation for future fertility, by a due care, and application of the manure raised from them.

The effects of the furrow-draining on the fields drained last year, have been calculated to astonish those who before were sceptical as to its repaying the expense. After being deep ploughed, in due season, the crops were so increased as compared with the former produce of the fields, as to go far towards paying the expenses incurred in draining them.

The number of cows kept by the cottagers are still on the increase, and the consequent advantage seems to be highly prized. In reasoning with themselves, as to house-feeding, cottagers are too apt to forget the increased reproduction from their land, in consequence of the increased manure. In an argument of this sort, it is not what their land *now* produces, that they ought to calculate their probability of being able to keep a cow from, but what it would produce *after* they have applied the manure from a cow for some time, looking to extraneous means for beginning the system.

At Bennetts, in the neighbourhood of Stratton, we have now got a draining tile manufactory in operation and have commenced furrow-draining. Lady Bassett has there, also, adopted the plan of giving advances of manure to such of the tenants as may be willing to act upon my advice, in the putting in of their crops. We have got a Scotch turnip drill, and instead of the miserable culture mentioned as prevailing in that neighbourhood, a number of the tenants have their turnips regularly drilled and horse-hoed, the land being properly cleaned and worked, and the crops excellent. **The quantity is five times greater in this than in any former year, with a promise of a very great further extension for next year.** The arrangements about the farmyards are improving, and, I should hope, the miserable practice of littering miles of the public roads adjoining the farms may soon disappear.

I am more and more satisfied of the utility of appointing agriculturists practically acquainted with their business. It is one thing for a man to read *The Farmers’ Magazine* and *The Mark Lane*

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<sup>11</sup> Might this be what we now know as Helligan, as in the Lost gardens of Helligan?

*Express* and then go to a farmers' club meeting and descant on improvement; but it is a very different thing for the same person to go and practise what he professes. The immense difference I have seen between professions and practice, in some cases I have known, excites ridicule, which, instead of forwarding, retards the adoption of useful improvements.

I am, Sir, with every respect,  
Your obedient servant, JAS. PETERS.

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The following is extracted from the account of the Agricultural Dinner, at Tehidy Park, in *The Cornwall Royal Gazette*, of November 4:

"The CHAIRMAN, in proposing the health of Mr Peters, referred to Mr Blacker's having delayed any remarks he intended to make till he had an opportunity of hearing how the cottage farmer got on.

"Mr PETERS, after returning thanks for the honor done him, said, the only thing he thought he could do was to call upon a few of the cottagers present to speak for themselves individually, as to the benefit they were likely to derive from an alteration in their system of farming. Before doing so, he hoped he would be excused a few remarks in reference to the discussion that had taken place about draining. He had considerable practical experience in draining before he came to this County, and much since he came here, and he found it was difficult, if not impossible, to lay down a general rule suitable to all cases, as scarcely in any two fields would exactly the same rule apply. It required judicious examination, and practical knowledge, to point out the manner in which any particular field could be drained, especially in respect of the direction of the drains. *Effectual draining*, by the best means, should be the object in view. It might answer very well to cut deep drains across the slope, in or above the springs, if the bar that sent the water to the surface was in the midst of open strata, but if the ground declined upon a clay, or retentive subsoil, then such cross drains might be made 20 feet deep without effectually draining the low ground; as the whole surface water from rains must lodge in the soil, over the impervious subsoil, in the basins of open ground so frequently found to exist in such cases, forming reservoirs, if not drained, and cause, when the land is in grass, the growth of rushes, and other poor aquatic plants, to the exclusion of the finer grasses. It is, in his opinion, a good practical way of testing whether the land wanted furrow-draining, to go in the wet season, or the day after heavy rain had fallen, and dig small pits, say a foot deep, and if these collect water, then there could not remain the slightest doubt of the utility of such draining.

"Mr Peters then called upon Matthew Mill, one of the cottagers present, to state how he got on with his farming—Matthew said, that he was afraid at first to try the new mode of farming, by growing turnips, as he never grew them before, not thinking that his land was good enough to grow turnips. He was also afraid for the loss of his crop of barley after his wheat. He was now convinced of his error and thought very differently. He kept a cow once before, but in Winter she was just alive, and in Spring, when she was sent to the lanes, she was very poor. Last year and this he grew vetches, and 'turnips as fine as anybody's turnips.' He got a cow and kept her in the house for the greatest part of the year; she was in good condition, and his manure was ten times as valuable as it used to be. With it he has fine potatoes, and he thinks, that after a while, he will be a great deal better still, when he gets the clover from his new cleaned and manured land.—'If he did not grow turnips he would soon be in the old stank.' In the same manner the following cottagers were called upon.

“Joseph Bray stated that he had derived great benefit from growing turnips. He did not know how he should now get on without them, they were so serviceable both for the pigs and the horse, as well as for the cow; and he was amazed at the difference in the quantity and quality of his manure. He had a fine crop of potatoes after it sure enough. Last year he lost about 8 Cornish bushels of potatoes, worth 6s. per bushel, by not taking Mr Peters’ advice, and draining his field; he has now got it furrow-drained, which only cost him 15s. and the carriage of the stones.

“William Trathen has altered his way of farming and grown crops of turnips. He had no idea that such fine crops of turnips could have been grown on his land. He should certainly not have had such crops, if he had pursued the old way of putting them in broadcast; and he can now keep more stock than formerly, which will increase his manure. Mr Peters here mentioned, that he gave this man great credit for his crop of turnips this year, in a field which he knew to be much infested with wireworms; and requested him to state how he managed to get rid of them—he said, that he first ploughed the stubble, then turned it back, his family following and picking up the worms, and thus, by continued ploughings and harrowings, picking every time, he had succeeded in greatly lessening their numbers, and he had not a single blank amongst his turnips this year—over  $\frac{3}{4}$  of an acre.

“William Rawe grew turnips last year but then adopted the old plan of putting them in on the flat surface, but they were so crooked, irregular, and thick, although he gave them a great deal of labour, they remained very dirty; it was impossible to clean the land. After seeing the turnips at the Park drilled and kept clean so easily with the horse-hoe, he was determined never to put them in the old way again. This year he put them in regularly with the Scotch drill. He had no trouble in keeping them quite clean and has a fine crop. He thinks the iron ploughs used by Mr Peters far preferable to the old ‘timberin’ ones; they are easier drawn and turn over the furrow better.

“Richard Trathen finds the greatest benefit from growing turnips, and other green crops. If he had not done so last year, he would have lost his cow altogether, as she was sick, and he was forced to keep her in the house; yet for all her sickness, she was in better condition after than she used to be. He also made so much dung, that besides his potatoes, he had dung to grow turnips and has a fine crop.

“Gabriel Mill.—Keeps a cow. Never kept her in the house, Summer nor Winter, except on a very stormy day in Winter. She made no manure but went about the lanes and crofts—(uncultivated heaths and furze)—this was always the custom of the country before. This year put in half-an-acre of turnips and is to have his cow in so soon as he gets a house repaired for her.

“Absalom Bennetts.—Has been improving his land by draining. Has got on much better from Lady Bassett’s assistance, and Mr Peters’ directions. He last year lost from 20 to 30 bushels of potatoes, worth 6s. per bushel, from his land not being drained. Has put in  $\frac{3}{4}$  of an acre of turnips this year. Mr Peters had them drilled; they are an excellent crop, and a great contrast to those of some of his neighbours.

“Mr Hocking, of Pool, then stated, that he had inspected the cottagers’ crops for nearly the last 20 years, to award premiums given by Lord De Dunstanville, and Lady Bassett, for the best crops of wheat, barley, and potatoes; that from other business, he could not go last year; but on again going over Nancekuke, Illogan, and Tolvadden downs, this year, he was astonished at the quantity of turnips grown by the cottagers within the last two years; as before, all you could see

was perhaps a perch or so put in for the use of the family. The cleanness and regularity of the crops was quite gratifying.

“Mr Burgess, of Trengrove, after making some very just remarks about the necessary outlay of capital by farmers, said, that he had laid out very considerable sums upon the farm he occupied, and he confessed, that he for some time had his doubts whether he would be repaid. He was now happy to say, however, that his crop this year had given him great encouragement to persevere. He said, that for some time, many of the farmers considered that Mr Peters was wrong in his propositions, and that his plans would not do for this country; but he had of late talked with some of the best farmers in the neighbourhood who candidly confessed, that after seeing these plans in operation, they had entirely altered their opinion, and were determined to adopt his practice. Mr Burgess would take the liberty of asking Mr Blacker what proportion of the arable land on a farm he considered should be in turnips. Mr Blacker in reply said, that he thought from a fourth to a fifth part was a fair proportion for a green crop. This brought on a very interesting discussion. Mr Hitchen stated that the Illogen Farmers’ Club had fixed the quantity at one-twelfth in turnips for awarding their premiums, and this had not satisfied all parties as some insisted on 1-20th as enough.

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No. 2.

*Letter from the Secretary to the Ballinasloe Union Agricultural Society, with Mr Clapperton’s Report for 1842.*

Ballinasloe, Dec. 17, 1842.

SIR,—I have the honor to acknowledge the receipt of your letter of the 16<sup>th</sup>, and to transmit herewith two copies of the Report of the Ballinasloe Union Agricultural Society. I had a conversation a few days ago with Mr Clapperton on the subject of our prospects for the next year, and he informed me that they were very cheering, and that nothing could exceed the earnestness with which the small farmers were now adopting his plans and suggestions; and I may venture to predict that, with Mr Clapperton’s exceeding industry and indefatigable exertions, and the convictions of the manifest advantages of green cropping and house-feeding now opening on the minds of the small farmers, our exhibition in 1843 will far exceed that of last year.—I have the honor to remain, Sir, your very obedient servant,

JOHN GILL, Assistant Secretary.

To William Blacker, Esq.

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AGRICULTURIST’S REPORT.

To the Committee of the Ballinasloe Union Agricultural Society

GENTLEMEN,—In addition to the book which I recently had the honor of laying before you, exhibiting what each farmer, acting under my instructions, has done in proportion, to the extent of his farm, I have now the honor, at your desire, to submit the following condensed report:

(tables)

umber of Farmers who have sown different Green Crops this year. viz.: [OF AOD codey ANAL TT  
On the Right Lon, Earl Clancarty's Estates, D. H. Esq., Castle Kelly, Kelly's Grove Estate, under T.  
H. Graydon, Esq., Right Hon. Lord Ashtown's Galway Estate, Captain St. Estate, under T. H.  
Graydon, Esq., Miss Donelan's Estate, under Thomas Birmingham, Esq., 1 | 302 | 10 196 107 13)  
ul lo ney | = a E Dn ols g ir. Re of Ground u | Acres. Roods. | Perches. Under Turnips, 412 Under  
Mangel Wurtzel, | 2 Under Rape, | 150 Under Vetches, |; 46 Under Clover and Grasses, | 216 ON  
OF Number of Competitors for Turnips, 170 Quantity of Drains executed, 7,481 Perches.

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The improvements in draining and extensive introduction of green crops could not possibly have been effected in the absence of the landlord's co-operation. In every part of the union where green cropping has commenced, the farmers have got the loan of all the seeds and have also received great assistance in draining. I am happy to say that there is a great increase of food both for man and beast amongst all the farmers who have commenced green cropping, upon a scale in any way commensurate with the extent of their holdings. The increase (and nutrimental qualities) of manure, by the consumption of turnip and other green crops during Winter and Spring, will be very great, and that ruinous system of having cattle roaming at large in quest of food during the Winter (by which incalculable injury is done to the ground) will be greatly lessened, if not altogether abandoned; but until now there was no other alternative. The green crops of every description have given the highest satisfaction, and **the weight and cultivation of very many of the turnip crops would bear a general comparison with Berwickshire or East Lothian.** I cannot sufficiently express my gratitude for the kindness which I have invariably experienced from the different Noblemen and Gentlemen who have called my services into requisition. My thanks are also due to the small farmers for all their unaffected kindness and good nature, daily manifested towards me, and for so frankly following my advice, which was very often diametrically opposite to their own preconceived opinions,

I am, Gentlemen, your obedient servant,

JAMES CLAPPERTON

Ballinasloe, Sept. 20, 1840.

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No. 3.

*Mr M'Kinnon detailing the progress made by his Agriculturist in the Isle of Skye.*

Corry, by Broadford, 10th Dec., 1842.

MY DEAR SIR,—I am really so much pinched for time that I cannot give you the detailed account of my operations which I promised to send you. I shall, however, give a short sketch of how I am getting on, knowing that it will be gratifying to you to learn that a system so much alike your own is likely to be attended with the best results, in a country in many respects similarly circumstanced to that in which you live. 'The scene of my operations is the estate of the Right Hon. Lord MacDonald, situated in the Isle of Skye. His Lordship, as well as his predecessors, have always been distinguished by an ardent desire for the improvement of the estate, and the advancement of the comforts of their dependants; and much money has been, at various periods, disbursed, with the view of effecting this object. Much has been done by the more

opulent tenantry, but the small holders (or lotters as we call them) have been deaf to all reasoning, and so long as they have been able, by the use of an old-fashioned instrument, known here by the name of the crooked spade, to raise a sufficiency of potatoes to keep soul and body together, they did not think of bettering their own condition. I been all my life resident on the estate; and having brought large tracts of land, bearing nothing but heather, into a productive state of cultivation, I could not help deploring that my poorer neighbours around me, who could do the same thing by their own labour, instead of paying for it as I did, would not be induced to follow my example; and I often turned over in my own mind various plans for inducing them to do so. Having done so, the conclusion at which I arrived was, that until the proprietor undertook to insist upon a better system of cultivation, and be at the expense of hiring an agriculturist, to point out to the people the way in which the land must be cultivated, there was no hope of improvement. I accordingly took the liberty of pointing out my views to several of my predecessors in the management of this estate, but whether they coincided in my ideas or not, the plan was never put into operation until last May, shortly after I took charge of the estate. My noble constituent, with that readiness which I have mentioned he has always evinced for the good of his tenantry, at once agreed to my proposal to appoint an agriculturist at his own expense, and we agreed that in the first instance his services should be limited to a portion of the estate under my own immediate superintendence, so as to ensure success. I confess I commenced with diffidence on a plan which I considered as new; but I had not proceeded far when I was told there was a gentleman at Strathpiffer who had been long following the same system in Ireland, and that it would be worth my while making his acquaintance. I accordingly repaired thither, and I shall always retain a lively recollection of the pleasure and instruction which my meeting with you afforded me, as well as of the encouragement you gave me to proceed. The instructions I left with the agriculturist on leaving home were, that the tenants (eighteen in number) of a farm which I had selected for our commencement, should inclose divisions of ten acres each. This was readily complied with; and I next directed them to commence trenching the land (which is a clayey loam, with a slight covering of moss) to the depth of fifteen inches, promising premiums to four of those who had most done by the 11th of November, provided it was finished off to the agriculturist's satisfaction. On the 10th of November I attended to decide the premiums, and on measuring the ground, found that several of the candidates had trenched above a Scotch acre. I regret that, writing this letter away from my own house, I cannot give you the measurement of each of the eighteen lots. All this land will be laid down with green crops in the course of the Spring; and I have no doubt, with the assistance of sea ware<sup>12</sup>, of which there is an abundant supply, it will yield an excellent return. Here, then, is an account of our commencement, and, I may say, it is only a commencement, for his Lordship has upwards of twelve hundred tenants of the same description on his estate in Skye, and I can now see no difficulty in extending the system among the whole of them. The agriculturist tells me that he has daily applications from tenants at a distance to visit their farms and point out to them what they ought to do.

I write in great haste, but remain, yours, very truly, — A. McKINNON.

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<sup>12</sup> Presumably seaweed?

*Report of the Castlerea<sup>13</sup> Union Agricultural Society, by the agriculturist, J. Kirkpatrick.*

I shall begin with a brief outline of the mode of farming practised pretty generally among the small holders in this Union, when I entered on my duties in March: and, I dare say, it will be recognised as descriptive—with a few unimportant exceptions—of the present state of agriculture over most of the Western part of the kingdom.

The crops in common use are potatoes and oats—the former, however, forming the great staple of the district everywhere, and cultivated without the least regard to order of succession, or the wants of the soil. They are invariably taken from the lea-break, in lazy-beds, sometimes without manure, and sometimes with ashes obtained by a portion of the land. The second year, that part of the surface which escaped burning the season before is considered not to be rotted sufficiently, and this furnishes an argument for another crop of potatoes—with a dressing of peat or bog mud, as an auxiliary—mixed, perhaps, with a little poor clay. If the ground is not destined to a third round of lumpers [a Coarse Kind of potatoe, much in use among the poor in the West of Ireland] it is then submitted to a scourging course of grain crops, which are taken, in almost every instance, two years at least, and not unfrequently three or more, in unbroken succession. After this it is *let out to rest*, or to *skin*—a process of self-renovation which it undergoes in a longer or shorter number of years exactly in proportion to the powers of fertility which the soil may happen to possess—but during all which period it remains utterly worthless to the possessor. It is impossible that he can expect to pay one shilling from it lying in this unprofitable condition. What better is it than the worst description of fallow land? Two or three acres of it must be barely sufficient to feed the lightest little Kerry cow during the Summer months—it is painful to have to represent this to be the situation of perhaps fully one-fourth of every small farm I have visited. Sometimes, instead of allowing the land *to go to rest at all*, another practice is resorted to, with a view to avoid having so considerable a part of the farm lying waste and idle during the more or less tedious process of self-renovation which it is considered materially to assist. After the ground has been cropped for a number of years consecutively, until it has become exhausted so completely that it is not in it for another season, it is again subjected to the potatoe course, as a restorative measure, with an enormous application of the grand specific, *black mud*: which, if mixed with cattle manure—saturated completely with the juices of good dung—or with lime, to decompose the inert woody fibre it contains, would certainly form an excellent compost, but which, when applied—as it usually is—in a raw, unprepared state, must prove just the very reverse of favourable to vegetation, by lowering the natural temperature of the soil in the excess of cold sour matter communicated to it.

**The mode of cultivating the potatoe is primitive in the extreme.** The ground is first scrawed and burned—or scraped with a plough or spade to the depth of 3 or 4 inches—a number of slits is then made across the beds, into which the cuts are pitched, which is called *sticking the seed*. Perhaps from a week to a fortnight after—any time before the plants appear—the manure is spread on the surface, where it is allowed to remain till it has lost any fertilizing properties (ammonia) it ever possessed, where it is covered by shovelling over it a little earth from a furrow 5 or 6 inches deep. After the plants have forced their way fairly above ground, they receive a

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<sup>13</sup> In County Roscommon

second earthing from the trench alongside, and this completes the after culture of the crop. In passing over the Union, in the 3d week of July, hundreds of acres were undergoing this second dressing; and being barely over the ground, could not have been planted much before the first of June. To this barbarous mode of working the land is to be attributed much of the imperfection, not only of the crop in question, but also the succeeding grain ones. In fact, the wonder ought to be, not so much that those should be bad, but that they should be anything like so good as they are—the very circumstance of the soil, under such treatment, being capable of yielding two—often three—white crops in succession, affording the very strongest presumptive proof how its productiveness might be increased under different management. Need it be any matter of surprise that the dense population of this Province should be visited with periodical—almost, I suppose, annual—famines? Is not the very minimum degree of attention paid to the cultivation of the soil while the very maximum amount of food is required from it? As an offset to this—let the land, every time it is in tillage, receive a good deep rousing furrow, to increase the staple of the soil, as well as to bring it to a proper tilth. By this means, and **by a judicious variation of the crops, it will, in a few years, become at least three times as productive as it is at present;** and, as the same seed, or rather less seed, will be required in the one case than in the other, the farmer will be better circumstanced than if he possessed three times the quantity of ground he now holds free of any additional rent.

The owners too of these fine lands are called on at once to combine their powerful influence in establishing an improved system of agriculture throughout this Union. This I apprehend, may be most successfully done by setting the example of a liberal and remunerating scale of farming upon their own estates: and, above all, by substantially encouraging every one of their tenants who falls manfully about changing his system, regardless of the taunts with which he may be assailed by his neighbours. The Society's premiums will induce the small holders to obtain manure by raising and consuming turnips and other green crops on their farms—a taste for good ploughing will be promoted by annual ploughing matches, and a few years of active exertion, on the part of the landlords and their agents, will be sure to bring round an improved state of matters. This result will take place as unerringly, in the nature of things, as cause and effect. Look at the stimulus given to the subject, of late years, in other quarters, under the fostering care of the Earl of Gosford, the Duke of Leinster, the Marquis of Downshire, &c. And look at the extensive improvements upon the estates of our own Co. High Sheriff. This is said, not with any invidious comparison, but from a sincere wish to see a similar enlightened character actuate all whom it ought to pervade—one spirit of kindling, all-impelling energy—by which to place the agricultural classes on a level with these of other countries.

I could write on endlessly, almost, for the subject is inexhaustible; and I feel that I have become deeply interested in the condition of the poor people among whom it has pleased Providence to place me—more so, perhaps, than I may obtain credit for in some quarters; I have not intentionally set down anything for the purpose of exaggeration. There is small occasion for this. Matters are bad enough in the *positive state*, although not by any means *hopelessly* so. I am encouraged forward by the ready reception I have experienced from every member of the Society who has called my services into requisition, as well as among the small farmers generally, with respect to whom I may give it as my persuasion, that the lateness of the season when I came among them, the scarcity of manure in very many instances, but, above all, the want of means, were the only barriers in the way of my advice being much more extensively followed. I am happy, however, to see that their attempts at green cropping have been, generally speaking, very successful. This I may state to be particularly the case with respect to the clover and rye-grass braids which, with hardly an exception, look well upon numbers of farms where

they never could be got to grow before, by invariably sowing them with the first grain crop, and putting them in with a single stroke of the harrow upon the fresh mould. This was the first thing I set about establishing, and I do think that I have done a deal of good in this particular. Next season I anticipate a very considerable extension of every species of green crop, from the preparations that are in progress, in the way of digging the ground destined for the purpose, collecting manure, &c., in various parts of the Union. I believe what led to the immense increase of these in the Ballinasloe Union this last year was permission to burn to a certain extent, and under particular restrictions. What these were I can't exactly say; but were the same liberty extended to the small holders in this Union, there can be no reason to doubt but it would be followed by a similar result. A very good stipulation might be that every person allowed to burn should sow, at least, one rood of turnips; and be bound, also, to sow out the burned ground with clover and grass seeds in the *first* grain crop. This, without lessening the staple of the land very materially, would put the whole country in possession of them *at once*: and if they had them *once* they would never be without them again—more or less. After the first year they would perpetuate themselves, in the increased quantity of dung they would afford, *when* the practice might be discontinued. The following abstract of the number of farms visited, and the number in each division of the Union having green crops this season, will, it is hoped, come under the eye at once.

(tables)

In the division of the land of — T. Willis, Esq., ] Clover and Rye-grass, 17 J. Madden, Esq.. | Vetches, tie ia &e., &e., | Turnips, "as ae a Rape, In the division of Ballymoe, comprehending the lands of— Captain Lynch, | Rape, &e., &e., Transplanted do., T. N. Bagot, Esq., ] Clover and 5 Ballymoe, Vetches, 3 P. O'Connor, Esq., | Turnips, Dundermot, Mangle arteel, =. 4 2 Clover and eae ay etches, Turnips, Mangle W urteel, Rape, Transplanted éo., . In the division of Williamstown, comprehending the lands of — Sir John Burke, Clover and Rye-grass, 3 Counsellor M'Dermott, | Turnips, dens 2 Mr Timothy, Cararoe, | Rape, ae l &e., &e. J — 6 In the Division of Ballinlough, comprehending the lands of— T. Wills, Esq. The Marquis of Westmeath, &c., &c. In the Division of F Lord De Freyne, Clover and Rye-grass,... Vetches, Turnips, Rape, Transplanted ditto, hpark, the property of — Clover and Rye-grass,... 21 Vetches, me nce ne Turnips, ove om Rape, we 4 Mangel W aoe In the Division of Loughlyn, the property of Lord Viscount Dillon—None. in the Division of Ballanagare and Castleplunket, comprehending the lands of— Mat. O'Connor, Esq., of Clover and Rye-grass, 3 Mount Druid, | Vetehees, | The O'Connor Don, 'Turvips, 3 M.P., &c., &e. | Rape, In the Division of Castlerea, comprehending the lands of— Thomas R. Wills, Esq., Castlerea, The O'Connor Don, M.P. Richard Irwin, Esq., High Sheriff. Lord Mountsandford. O. Young, Esq., Harristown. Nicholas Balfe, Esq., Southpark. J. Kirkaldy, Esq., Nearnbrook. With respect to most of these, as the sowing season was nearly over before I was called upon, they are consequently not included in this year's report. Total number of farms visited, ... \$72 Total number of green crops, ooo | BGS Total number of drilled potatoe:

There has been but little done as yet in the furrow-drain system, with the exception of Mr Irwin, of Rathmile, and Mr Sandford, of Derry; but I know of a good deal about to be commenced in different parts of the Union.

J. KIRKPATRICK

*Rev. W. Eames's Report of the Success of the Agriculturist at Tyrrell's-pass*

Clonfadforan Glebe, Nov. 30. 1842

MY DEAR SIR,—You ask me “How we have been getting on, and whether I shall have any cheering statistics to send you for your farmers’ dinner?” The unceasing interest which you take in our agricultural success, in a district with which you have no connection but the connection of benevolence, calls for my grateful acknowledgments. I am happy to say that I can furnish to you “cheering statistics.” These, however, must be judged of by comparison. Hercules was once an infant. The green dale oak was once an acorn. We are only in our infancy. I would fain hail our future growth to greatness, but I am loth to deal in prophecy. I shall rather advert, as you desire, to what the condition of the country was when we commenced, and state as nearly as I can what it now.

The experiment, as is, perhaps, in your recollection, was commenced in the early part of 1839. The agriculturist, through whom it was to be carried out, was he whom you procured for us. At that time, when lands had been exhausted by tilling them, the practice was to relinquish them and leave them to the efforts of nature, unaided by art, to produce herbage, and they were, therefore, for some years wholly useless—the surface, in effect, a *cuput mortuum*—no green food was raised, and, consequently, there were no means of support in Winter but a scanty supply of indifferent hay, or of straw, barely sufficient for the life of the animal fed upon it. Such was the state of things when the agriculturist referred to was sent among the farmers. The report by him of the acceptance by the people of the plan of green-feeding was, in most instances, disheartening, yet accompanied, as I thought, with prognostics of success. The answer generally was, that they did not understand the plan, but that they thought the person who sent him would not recommend anything which was not for their good, and that they would do as they had been advised. This was the answer of the poorer sort, but the more knowing treated the plan as absurd, and the execution of it as impracticable. I apprised you of the success, notwithstanding this inauspicious commencement, which attended the sale of seeds upon time from the Loan office. I intimated to you **the value which, in the second year, was beginning to be attached to the services of the agriculturist**, and I mentioned to you some of the plans which were resorted to, and for which our ingenuity was taxed, to overcome the objections of the people to the sowing of turnips. At that time, we were unaided by other Societies—we were operating alone. But our success stimulated Dr. Bewley, of Moate, an active and benevolent man. He had introduced a Loan Society into Moate, after the model of that of Tyrrell’s-pass, and he now followed the example set him of also **selling, from the Loan-office, agricultural seeds**. He also formed an Agricultural Society and has established an agricultural School. The Fartullagh Agricultural Society was also formed by Mr Wm. Fetherston H., of Robinstown, and this Society comprehended Tyrrell’s-pass. The Earl of Charleville, too, formed an Agricultural Society in Tullamore, which acts in a district of which a part is in our neighbourhood. The Fartullagh, now the Westmeath, Society, both in the last and in the present year, has had an agent for the sale of seeds. The Earl of Charleville furnishes seeds to his tenantry at prime cost and has laid out a model farm at Croghan. Seeds, then, are sold at Moate, from the Loan-office at Mullingar, by the agent of the Westmeath Society—at Tullamore,

under Lord Charleville's orders— and all these are engaged in the same work, and in portions of the district in which the Tyrrell's-pass Loan Society is acting. I make this preliminary statement as well to do justice to these Societies, as also to intimate to you that you cannot form any just conception of the improvement of the country by the information which can be given from our Loan-office alone.

And now to resume my little history:

There was, in 1839, a foundation laid for the introduction of a system of a rotation of crops and of house-feeding, but it was only an introduction. The beneficial effects of sowing turnips were, however, apparent, and advances were made in 1840. The agriculturist was more in demand, and his advice was solicited by many who, previous to his establishment, laughed at the idea of a Scotchman being a better farmer than they. Clovers had, from the beginning, been sedulously sought, for the advantage was obvious, and they were not exposed to pillage<sup>14</sup> as turnips are. Vetches, too, would be purchased to any extent. No ground is indeed now laid down without clover, and every year a portion is laid down; but the cultivation of the turnip, though the value of it was admitted, was making a comparatively slow progress. In 1841, more cheering prospects of the extended cultivation of this root opened, and in 1842 they have been realised. The greater earnestness evinced by the farmers in 1841, to avail themselves of the improved mode of culture, induced me to secure to them superior turnip seed for the ensuing, that is, the present year. I, therefore, procured from Mr Skirving, of Liverpool, his improved purple-topped Swede, and bullock turnip seed. The reliance, as was foreseen, of the people on the genuineness of the seed, created a demand for it. The apprehension of the crop being stolen had nearly given way, and very many who had a rood of ground suited to the root sowed it. Indeed, this result was aided by the failure of the potatoe crop in the former year, as some who were unable to procure potatoes for seed sowed the turnip that their ground might not be idle. The apparent evil has been attended with good, as they who from necessity began the experiment will now continue the culture of the turnip from a knowledge of its benefits. There were £25 worth of turnip seed imported. Every grain of the bullock kind was sold, as was that of the globe; demand upon demand was made for more of each, so that the actual quantity which might have been sold cannot be calculated. A small portion of the Swedes remain in the store. And here it may not be unsuitably remarked, that so high is the opinion in the country of the excellence of the seeds sold from the Loan-office, that even traders who dealt in who had tracts of land to lay down, have applied for the intervention of the office in procuring seeds. This is a matter which seems worth dwelling on, as the opinion of **the genuineness of the seeds, especially after the late wet seasons, has contributed much to the popularity of the system.** As to Skirving's turnip seed, the prestige entertained of it has not been disappointed.—The crops are admirable.

As a further proof of the progress made in agricultural improvements, it may be added that ten iron ploughs have been sold from the Loan-office. When, three years ago, I offered to procure them, and to sell them at first cost, on six months' credit, not a candidate offered. In this year, so urgent was the demand for them, that when there were too few to supply all the claimants, there were squabbles for them among the competitors.

**What, then, is the opinion generally entertained of green-feeding, by the farmers? That, in the present times, it would be impossible for them to exist without it,** and that nothing but inability, from want of capital, or some other equally urgent cause, imposes upon them the necessity of not appropriating a due proportion of their lands to the purpose. Here, then, is a

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<sup>14</sup> Some turnip fields had to be guarded at night to foil gangs of turnip-ruistlers!

sketch of four years before you; and, I think, I may truly say, that it furnishes “cheering statistics.” I would fill up the outline, in some measure, by observing that the purposes to which the turnip is applied are so various, and the benefits obtained by those who cultivate it carefully, so manifest, that the future use of it appears to be secured. As to its application: calves are reared on it, after the first three weeks, with scarcely any milk. Horses are fed on the Swedes; milch cows on the turnips boiled; the water and the root being given together, in about twelve hours after being boiled. Pigs are supported in the Summer on the thinnings, a little bran being added to the mess. As to the benefits: one farmer tells me that he holds a farm of 15 acres; when he first took it, he could feed only ten head of cattle, and now he can feed, on nine acres of it, 15 head of black cattle, and two horses. Two acres of clover, and 1¼ of turnips, furnish the food, together with the land referred to, and he challenges the whole neighbourhood to produce as good stock. He has, in effect, more than doubled the extent of his farm. The acres here spoken of are plantation measure. As to the number of converts to the system, it would be impossible to calculate them. Those who are supplied with seeds from the Loan-office alone, may, in the present year, be estimated by hundreds.

If now we take a retrospect and compare the present state of agriculture among us with its condition **four years ago, when the so-called insane project was started of introducing an agriculturist, and green-feeding**, I presume the enterprising and benevolent will find abundant encouragement in engaging in pursuits for the advantage of his fellow-men, deemed, by the more timid, absolutely impracticable. Prejudices there are still to be overcome, in the cultivation of the turnip crop, especially the thinning of them; but these are giving way. It is a matter which cannot escape observation, that they who thin have the best crops, and take the agricultural prizes; and the services of the agriculturist are, for the same reason, the more valued; as they who have succeeded in obtaining prizes, have been acting under his direction. The farmers, as might be expected, in the vicinity of those who have turned their ground to advantage, are preparing to imitate their example; and very many are inquiring of the agriculturist whether is suited to green crops? and, on being informed that it is, profess their intention of preparing it for the purpose, and sowing in the next year.

I have, in this report, confined myself almost exclusively to the progress made in the culture of the turnip. I have done so, because the culture of it lays the foundation of every other improvement in agriculture; and because the prejudices against the culture of it were the most difficult to be overcome. Clovers, rape, carrots, mangel wurtzel, and cabbages, are also cultivated; so that, I think, I may say, there is, at least, a stir amongst us.

I have now endeavoured to inform you how we have been getting on, and, if I have not wearied you, I trust you will accept, with favour, the statistics which I have furnished for your farmers' dinner.—I am, my dear Sir, your obliged and faithful,

W. EAMES

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No. 6.

*Mr, M'Lellan's Report of his success, as Agriculturist on the Duke of Leinster's Estate.*

Maynooth, 21st Nov., 1842.

SIR,—The breadth of our green-crops, this year, has been very considerably increased. Every farmer, I believe (with the exception of those holding the town-parks<sup>15</sup>, who, from certain *delicate* reasons, may not venture upon them), whatever be the extent of his holding, has his patch, or field of turnips, extending from two roods to ten acres. The very graziers themselves, with a solitary exception or two, have set themselves to the good work; in short, the value of this crop, and other green ones, is now generally appreciated; and, therefore, as you are well aware, must continue to progress here, as it has done in every other place where it has once been fairly established. From the cultivation of turnips, there is no receding, from the moment that their qualities are known. Who so blind as not to perceive, that from thirty to forty tons per acre—of **a root of which cattle are so extravagantly fond** (and any person disposed to try, may easily produce that quantity), is not superior to any other kind of crop ? Only let the person prejudiced, or the habitual sluggard (they are oftenest one and the same individual), look over his mearing, at any season, but particularly in Spring—let him, I say, only look over to his neighbour's cattle, who is a turnip-grower, and compare them with his own; and if he is not then convinced of the necessity of a plentiful supply of green-food during the season when the grass has ceased to grow, it is time for him to change his occupation; for, he may depend upon it, he can never thrive as a farmer.

Since my last, several of our *nearest approach to regular rotation farmers* have been added to our list. Outstanders—*real* barren—fallow wheat cultivators, are now fairly the exception to the rule; and, I do think, are both ashamed and tired of the practice. We have rarely an instance of two grain crops in succession and, I trust, the day is not distant when we shall no more have one. We produce as fine crops of rye-grass and clover hay, as can anywhere be seen—and the farmers find it a remunerating crop: it is, indeed, so much a favourite, that the desire to have it evidently encourages to those other steps, in good farming, through which alone it can be successfully produced. There has been little drainage going on; but what has been done, has been upon the right principles, and very well executed. It was my intention to have been more minute in my report, but want of time must plead my apology: for the post-hour is almost arrived; and I wish you to be possessed of something from this quarter, by to-morrow evening, which, I hope, will turn out a happy one to yourself, and all concerned.—I remain, Sir, with much respect, ever faithfully yours,

W. M'Lellan

To Wm. Blacker, Esq. .

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No. 7.

*W. Bense Jones, Esq., as to the improvement on his Estate, under his Agriculturist*

Aghalurky, Bandon, Dec. 9, 1842.

MY DEAR BLACKER, Many thanks for your note. I find everything progressing very steadily and satisfactorily. With one or two exceptions, the turnip crops throughout were far better than last year. There were very few crops that were not good, and several were excellent—as good as I could wish to see them. Our tenants have taken the prize, both for clover and turnips, given by the Royal Agricultural Society in this district; and though I have nothing particular to tell you, or

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<sup>15</sup> A smallholding or parcel of farmland close to a town, typically rented and farmed by someone living in the town itself.

anything especially worth notice, yet all is doing really well, and as fair as one can expect; from what I see and hear, tec, I am sure in time it will have its effect upon our neighbours. I have a good many copies of my pamphlet on hands, and if you can give them a fillip at your dinner, pray do so. I have had no trouble with rents and have got all but about £25; and this was a man with above two acres of turnips, who begged for time, that he might buy stock to eat them, which he has since done.

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No. 8.

*Report of James Rocks, formerly a small farmer on the Gosford Estate, and sent to cultivate a model farm on the Estate of Lord Oranmore, near Claremorris.*

Model Farm, Castlemacgarret, Claremorris,  
November 22, 1842.

HONORED SIR,—When at Markethill last year I could give but very little information with regard to the progress and benefit accruing from house-feeding in this country, until having made the experiment here, which I find to produce very great advantage and benefit, leaving a considerable profit, and a large quantity of manure for this season, sufficient for an acre and a-half of turnips and mangel wurtzel, together with a sufficient quantity for potatoes. The Swedish turnip this year is equally as good, and I should think better, than last year's, of which I took a sample to Markethill. **Such as I weighed of this year's were from 16 to 17lbs.** The hybrid and purple Aberdeen are equally as good, but in size far larger. I am feeding six cows at present and am to purchase two others in addition. I give them at present the tops of the mangel wurtzel and of the turnips, with some straw, in order to save the hay and turnips for the Winter. I had half an acre of Italian rye-grass which yielded three tons and a-half of hay, and eighteen barrels and a-half of seed, which sells here at 15 shillings the barrel of three stones. The second crop of this half acre has been cut for house-feeding, except a small corner kept for the purpose of saving the seed, which was equally as good as the seed of the first crop, the weather being so favourable. Mr Lambert has taken with him from Dublin, a model of the windows approved of by the Highland Agricultural Society, which I have here, but he has himself invented the model of a window, which is considered by all who have seen it, far superior, more commodious, and economical, and is made with as much facility. It is divided into four equal parts or sashes, having nine panes in each sash, each pane 5 by 3½ inches only; any of these sashes, or the entire, at the same time can ventilate; the panes are so small that it is difficult to break them, and if broken, the cost is a mere trifle. There have been 4,210 perches<sup>16</sup> of furrow drains last year made on this estate, through the indefatigable exertions of Mr Lambert, and the encouragement held out by him by means of premiums and otherwise. The improvements by this mode are incredible; he has spent several whole days, from morning till dark night, laying out drains this season, and the people seem even more desirous of doing them than last year; **there is a spirit of emulation between them, and they seem to begin the work with great vigour, seeing the benefit arising from what had been done last year.** I know one of the tenants on this estate, in particular, James Garry, who had obtained the second premium last year, who has drained a piece, and when Mr Lambert and I went on the land we could not walk through it, it was so wet, and not worth 5s. an acre; he drained it perfectly well. We went to see the same piece this year and found it so dry that it was almost incredible to fancy it was the same ground: It had a good

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<sup>16</sup> Almost 13 miles!

crop of potatoes. This is only one of the many instances of the kind on Lord Oranmore's estate. All this improvement is owing to the exertions of Mr Lambert, who takes pains to impress the necessity and utility of improving wet and waste lands, which was, to the tenants, up to this time, almost useless. I am quite well. I get every accommodation I require. I want for nothing. The house is now complete; very commodious and comfortable. I hope you will excuse my being so tedious and trespassing so much on your valuable time; but, endeavouring to give you a full account of this country, may have caused my narrative to be tedious. I hope you will send me a Paper containing an account of the meeting and dinner, I am so anxious to hear how you are all going on. Wishing you every happiness and success, **and a speedy restoration to health,**

I remain, honored Sir,  
Your most humble and obedient servant, James Rocks  
To William Blacker, Esq., Markethill.

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No. 9.

Mrs Gilbert on Liquid Manure

Eastbourne, Nov. 28, 1842

MY DEAR SIR,—I have just read with much pleasure in the Cornwall Paper, the account of the success of the agriculturist you recommended to Lady Bassett; and, as you kindly wish to hear how I am going on, I have the pleasure of saying, J. Piper, the lame man you may possibly recollect seeing at East Dean, is proving an agricultural teacher there, and has undertaken to cultivate land, which was thought worthless, on Beachy Head, and much exhausted by those who cropt without manuring or weeding, and having last week said he had rather give 20s. an acre for it with a tank, four feet deep and wide, than have it rent free, without this little pit, I have had one made water tight; and by mixing a bushel of soot, two or three pails of night soil and water, for 12s. he expects to provide manure for an acre. That no night soil may be lost, the cottage is provided with a portable receiver, and the value of liquid manure is so much better known now than formerly, that Mr Frederick Webster, son of Lady Webster, of Battel Abbey, who is beginning farming as a profession, has a cast iron liquid manure cart, which I am invited to go and see. **This lady it was, who being solicited to lower her rents said, I must first see your land, and finding it weedy said, instead of lowering I shall raise your rent, for if you can afford to grow weeds, you can afford to pay more rent.** It was at Lady Webster's I saw the clover plant 10¾ feet high<sup>17</sup>, which yielded the seed I sent you; mine is only 4 feet this year, but Lady Webster's was 15 months' growth. I believe it will be valuable as a kind of hemp in Ireland. Piper's cow continues to give him most valuable assistance in harness. She draws as much in two hours as a man could in a day; is in excellent condition and milk, and goes steady along chewing her cud, and is always ready to be harnessed (which is the first thing after milking in the morning), knowing she will have extra food when she has done work. Ten acres, I believe, is double what any man can cultivate with the spade; but Piper has **the work of two large families, which would otherwise be in the Union house**<sup>18</sup>, and, also, a man who was in the House of Correction last Winter. It will be a trial whether their labour will repay the cost, which is very desirable to be ascertained, as there are now in the Eastbourne Union house 198 persons

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<sup>17</sup> Cannot have been clover. Must have been some bush species of legume.

<sup>18</sup> The workhouse

who, at 3s. per head weekly, cost £1,544 a-year, or the rent of 7,722 acres of down land let as sheep-walk at 4s. per acre; and J. Harris, who was a pauper 2½ years ago, with his wife and 5 of their children, at 3s., a week, cost at the rate per annum of £54 12s., or equal to the rent of 273 acres of sheep-walk, at Eastbourne. Now he maintains his family on 5 acres, and has paid me 60s. per acre, in rent, rates, tithes, and taxes, to that amount, supporting others, instead of being a burden on them. I wish you would come and verify this wonderful tale on the spot. **I am very sorry for your long suffering**, but your visit to Mr Yorke and Lady Bassett, bespeaks your amendment. I hope you can tell me how the model farm near Dublin is going on. Since writing this, I have just received and read, in the Journal of the English Agricultural Society, Dr. Danbury's remarks on my Agricultural Schools; and I hope it may help to the explanation, why **Ireland, with its great population, contributes so much to the food of England**; and that is, because the farms are so that children and women help to work on them, whereas only men on the great English farms work, and the wives and children are kept useless; and because human excrement is commonly wasted, which my 400 tenants use. **I have supplied many butter tubs, painted, and hooped with iron, and iron handles, probably Irish tubs, to be covered with moveable seats, that nothing be lost.**

"Waste not, want not."

I am, dear Sir, Yours most truly,

M. O. GILBERT

You can make what use you please of this, with my name.

Nov. 24, there were 198 paupers in Eastbourne Union house, who, at 3s. per head, cost 30,888s. a-year, or equal to the rent of 7,722 acres let as sheep-walk, at 4s. per acre; whereas, 700 acres would well maintain them, if they were suffered to cultivate them, and they might pay from 10s. to 20s. rent, instead of being a cost of at least £1,544 a-year in rates; and the out-door relief is considerably more.

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No. 10.

*John Hogg on Liquid Manure.*

Drumgaw, Dec. 23, 1842.

HONORED SIR,—I beg leave to remark that, **having carefully attended to the gathering of liquid manure for the last season, I am of opinion that I never tried anything so beneficial**, as was enabled to set one acre more potatoes by attending to it; and I think it requires only to be known more publicly to be generally adopted, as I can now have a sufficient quantity of manure for both potatoes and turnips. The cask I have put down holds 90 gallons, and I empty that once a week over my clover, as a piece I treated in the same manner was double as good as the other that was not treated in that way. I have as much collected at the present time as would be worth being inspected by some competent person; and I think, on the whole, it is the best suggestion yet made by your Honor.—I am, &c., &c.,

JOHN HOGG

Wm. Blacker, Esq., &c., &c

No. 11.

*Mr Herd and Robert Thompson, as to Heracleum, cultivated at Gosford.*

Mr Herd says, he cut three times a piece of ground 9 feet long, by 12 broad, which gave 12 stones, being at the rate of 31 tons, 27lbs. to the English acre. Heracleum, which went to seed on a piece of ground 17 yards long, by 4 yards broad, gave 50 stones, which will be equal to 22 tons, 4cwt. 3qrs. 11¾ lbs. per English acre. This Heracleum was cultivated in the open field.

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SIR,—I had a piece of ground planted in Gosford with Siberian cow parsnip, containing 4 perches, off which I have taken, this year, 109 stones weight (which I sent to Mr Herd to feed cattle), which was cut in June and July.—I am, Sir, your obedient servant,

ROBERT THOMPSON.

Gosford, Dec. 22, 1842.

This was allowed to go to seed, but the ground was very rich.

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No. 12.

*Value of an acre of Flax, at 88. 3d. per stone, equal to Oats at 9d. per stone, by Alexander Small.*

The following statement is in reply to the 4th subject of discussion at the Markethill Agricultural Dinner:

(Table)

Average produce of an acre of oats, L5cwt., at 9d. per stone, ... see oes £410 0 Straw to pay reaping and threshing. Average produce of an acre of flax, 24 stone, at Se. 3d. per stone, ove ove £9 18 0 Reduced for extra price of seed beyond oats, --£0 10 0 Extra expense of os 'ecutching, perstone, ... eee Por one-half the maaure for 'the former year, for potatoes, Sjewts, do, 1001bs. perhaps 30 tons, Skirving s Swede without tops, . do., without tops, . Yellow Aberdeen, without tops, ... Dale's Hybrid, without tops, ... do. tee without teps, White Norfolk, without tops, cwts, qrs, the, 14 0 22 16 1 20 i4 i 4 18 2 «8 17, 0 8 w 0 0 io = 10 2 24 1 20 7 @ 2 15 2 24 Quantity per aere. of Turnips Crop, pe

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No. 13.

*Experiments with New Manures, and observations, by the Rev. Richard Archer, Hilltown*

(tables)

My opinion is, that guano, at its present price, would not pay as a manure for oats, though the crop will be good. English experiments seem to prove it unfit for wheat. But it is most valuable, as giving a facility of producing turnips, where all other manures cannot be had. It will also produce a potatoe crop, and so far valuable, as eking out the farm yard manure when it runs short. But its action is so extremely rapid, and it seems to run the plant so quickly through all its stages of vegetation, that I fear it will be of little benefit to the succeeding crop. I have not yet tried it for top-dressing. Too much stress cannot be laid upon the necessity of making tanks for liquid manure. I have made a small one, 7 feet in diameter, 44 feet deep, cut in compact clay, and I did not like it for that reason, covered over with rough grove timber, and sods, and then clay beaten hard, to keep out rain water, leaving a hole for a pump, and a man to go down and clean it out. It holds, by computation, 1,067 gallons, yielding enough for an Irish acre. I find it accumulate so fast that I must make another, and a larger one, to pump it into, and lie till seasoned. It smells extremely like the ammoniacal gas water. From my small experience in this already, I now see what I must have lost before.—I am, my dear Sir, with great respect, yours, faithfully,

Wm. Blacker, Esq.

RICHARD ARCHER

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Deer-Park, 31st Dec., 1842.

SIR,—In compliance with your request of yesterday, I beg to forward you the comparative weights of turnips grown from different kinds of manure on my own farm. I make the calculation from one English square perch of each, and a fair average of the field, coupled with a few brief remarks:

(tables)

The land on which the above was grown was of similar quality and prepared exactly in the same manner. For my part, I prefer farm-yard and compost manure to any other, where it can be obtained, and for these reasons, that I am sure of having a fair average crop, and the year following my ground is in good condition; but we can't as yet tell what may be the effects of the guano on the succeeding crop, but there is this in its favour, that it will give a crop of turnips, and **he who once can get enough of turnips need never want enough of farm yard dung in future.** From the above comparison you will observe the falling short of tops from guano. I remarked that for the first two months the leaves presented a much more luxuriant appearance than the others but afterwards declined considerably. The turnips were grown in drills, 10 inches asunder, 2 feet being between the drill and the seed, a cross between Dale's hybrid, and Swedish, of my own saving. I did not mix the guano with as much earth or ashes as is recommended, which, perhaps may have been against the produce, but, at any rate, there can be no doubt of its utility to introduce turnip cultivation, when other manure is scarce.

I am Sir, your obedient servant,

ALEX. KINMONTH

Gosford, 30th Dec., 1842

SIR,—This year, on a farm of Lord Gosford's, Baleek Park, I experienced the benefit of guano manure. I put in seven acres of potatoes, on guano, 2 cwt. mixed with 30 bushels of clay ashes, and the crop was as good as any in the neighbourhood grown from farm yard manure. I tried three drills without any guano, and on six drills I put a double quantity, both were a total failure. Great care should be taken when mixing the guano with the ashes, as if not properly mixed, it would be very injurious to the crop; one part not getting any at all, and the other part a double quantity, both of which I conceive to be equally injurious. In the early part of the season, I sowed an acre of ground with carrots and mangel wurtzel, on guano; in consequence of the drought at that season they failed. I afterwards sowed the same ground with turnips, and the crop is a very fine one, producing about 46 tons to the English acre. I made several experiments with other kinds of manure, the ammonia, the patent fertilizer, &c., and could see no difference between the crops to which they were applied and the adjoining ones—neither upon turnips, plants, clover, nor meadow. The clay ashes I obtained by burning into the face of a clay hill, but did not burn the surface; in this way any quantity of clay ashes may be obtained without injury to the farm, whereon there is a clay hill, by beginning at the low part of the field, in the mearing ditch, and cutting right into the bill, upon the same level. The clay will burn, just as it is dug out of the hill, perfectly well, when the heap has been well lighted. Any person, by taking this plan may raise as many turnips as will prevent his wanting manure for the rest of his life, if he to keep up his proper quantity of turnips, and if he does not do that he has only to blame.—I am, Sir, your obedient servant,

WM. HERD

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TO WILLIAM BLACKER ESQ.

SIR,—In reply to yours of yesterday, in reference to my experience of guano in producing a turnip crop, and as a substitute for yard manure, I have to inform you, that in June last, I purchased a bag of it, weighing somewhat upwards of 1 cwt. 1 qr., from Mr Dalzell, Newry. I put it on nearly three roods of ground, and I confess I did not do the trial full justice, as to the time or manner of putting in the crop, merely from having little or no faith in the experiment, but I certainly have been very agreeably disappointed, in finding a crop on the ground on which the guano was sown, superior in bulb, and altogether a more luxuriant appearance in the tops, than turnips, immediately adjoining, which were tolerably well prepared with yard manure. I am of opinion, however, that more of the guano should have been applied to the same quantity of ground, because, in a few drills, where more than a fair proportion was applied, the turnips were very superior. I have already engaged my guano from Mr Dalzell for the ensuing crop, believing there is a general deficiency of hay and straw in the present year, which will cause a corresponding deficiency in the usual quantity of yard manure, and which makes the guano very desirable, and particularly so, from its being so portable, and so efficient a substitute. I am, Sir, with respect and esteem, very sincerely yours,

CROZIER CHRISTY.

Ballynagh, Dec. 31, 1842.

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Mullabrack Glebe, Dec. 1842.

SIR,—As I had not an opportunity of stating my opinions at the Markethill dinner, I now state them, by letter. Having made some experiments on manure, I consider it to be very profitable. We put it under potatoes, at the rate of 2 cwt. to the statute acre, and the produce was 1½ st. more to the perch than from the farm yard manure. I also proved how it would do with manure, putting 1lb. to the perch, and there was a bushel more potatoes on that extent. There is also as weighty a crop of turnips from the guano as from other manure, and they appear to grow longer. It requires to be mixed with ashes, or any other rotten compost, to enable the sower to divide it evenly over the ground. The land requires to be well prepared before it is put on. As we have proved the benefit of guano manure for green crops, both at Mullabrack and Elm Park<sup>19</sup>, we intend using a great deal more of it this season. We have also made a trial of barley wheat or naked barley. We planted 106 pickles in the latter end of April; we reaped it first on the 1st or 2d of August; second reaping about the middle of August, and 3d, the latter end of August. It all grew from the one planting, and the produce of what we planted was 7,636 pickles. There was very little difference in any of it except the last cutting was a little smaller, but it was all a very fair sample. In any way this grain has been used it has been proved to be nearly the one-third better than any other barley. The India corn also promises to answer well, having ripened perfectly, and I shall sow a larger portion this year.

I remain your obedient humble servant, WILLIAM RENNIE

To William Blacker, Esq.

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#### SONG, BY MR SMALL

When old father Adam commenced as a farmer,  
No rents nor no taxes he had for to pay;  
Nor was he confined to a four-course rotation,  
For he had a whole world of primitive ley.  
With all these advantages, one thing was wanting,  
For woman, dear woman, had not yet been made;  
Without that dear creature, the choice work of Nature,  
What pleasure would be in the plough or the spade ?

In these early ages of tillage and virtue,  
All strangers to commerce, its puffing and lies,  
They might have continued contented and happy,  
But then they would build a new way to the skies.  
Hence, all these divisions of language and manners,  
Of business and taste, in the world as now;  
Those only remaining contented and happy  
Who always can live by the spade and the plough.

Old Rome, in the palmiest days of her glory,  
When freedom was stamped on each citizen's brow,  
Her Statesmen and Senators, famed for their wisdom,  
Were then not ashamed to be found at the plough.  
So now, in the land of our own dear green Island,

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<sup>19</sup> Home of Col Maxwell Close until the new Drumbanagher House was completed in the late 1830s.

Where husbandry long had been left in the shade,  
We find that the chief of her sons are contending  
For who shall do most for the plough and the spade.

On this noble list stands the name of a Gosford,  
A friend to the plough, and I'm sure ever will;  
And who has not heard of the name of a Blacker,  
Who caused such improvements about Markethill ?  
House-feeding, and breeding, with all their improvements,  
And sewerage and draining, all done with great skill  
I think we might challenge the Province of Ulster  
To show better farming than at Markethill.

THE TELEGRAPH first will report this great meeting,  
And Editors many will copy the same;  
We hope they 'll be pleased to inform all their readers  
That poverty here is known only by name.  
No tenants half starving, no farmers half naked,  
And none by insolvency left in the lurch;  
Our wives and our daughters, you'd take them for ladies,  
To see them on Sundays, when going to Church.

We hail the bright days that awaits agriculture,  
When Corn Bills and Tariffs shall vex us no more,  
And brave sons live in peace with each other,  
Their feuds and dissensions forgot evermore.  
And Now, brother farmers, as sons of old Adam,  
Our bread we must eat in the sweat of our brow;  
For earth's proudest sons would be naked and starving,  
If we did not handle the spade and the plough.

Postscript to the Song, to be spoken,

My song was too long, else I thought, once or twice,  
To give brother farmers a word of advice:  
My advice would have been, to exert, one and all,  
And not let the cup go again to young Small;  
And to him I would say, as you know he's a friend,  
What yet may be wanting be sure to amend;  
And to always remember, at every sip,  
That danger may lie 'tween the cup and the lip.