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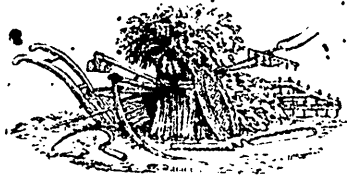
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*From the Scottish Farmer.*

### ON THE FIRST PRINCIPLES OF AGRICULTURE.

As every trade and profession must now-a-days have its axioms, postulate, or first principles, in order to give it scientific dress among other crafts, it is highly reasonable that the art of Agriculture, which is now almost completely reduced to a science, should also be permitted to assume its first principles. Without the knowledge of first principles, nothing can be expected from any of the practitioners of Agriculture worthy of attention—their practice being merely a copy from that already established, if not some gross deviation, perhaps, from the beaten track, by means of some erroneous idea of their own conceiving. Men acquainted with first principles will never deviate from them, while they find them correct; perhaps they may try some experiment consistent with them, and succeed. This, then, is the foundation from which we are to expect a rational system of Agriculture, adapted to all the varieties of soil, climate, and seasons, with which it must ever be connected.

It is true that by means of great attention to, and a careful and judicious imitation of, good Farmers, a man of mean talents is sometimes known to make a tolerable figure in this line. He may raise good crops; and good crops are no bad criterion of good farming. Indeed, a man, otherwise a blockhead (at least one who has no notion of first principles), often excels those who adhere to them with scrupulous exactness; but this must be only where the knowing man wants the talent of strict application. This talent is an essential requisite for a Farmer: indeed, it is indispensable in every occupation where success is desired.

The general principles upon which the success of Agriculture depends are—

1. Without draining wet land, no improvement.
2. Unless land thus drained is properly cleaned, the object of draining is frustrated, and that in proportion as this operation is executed.
3. Manures will always fail in producing the desired effect, in proportion as draining and cleaning are neglected.
4. Early sowing always produces shorter and stiffer straw than late sowing, and that in exact proportion to the times, when not affected by extraneous circumstances.
5. The various species of seed-corn are adapted to various soils, situations, seasons, and other circumstances.

6. Picking and propagating the best heads of the most approved kinds of grain and seeds is the surest method of preserving them undegenerate.

**Draining.**—This article has been amply discussed by able hands, and Elkington's and Smith of Deanston's systems of draining are universally known. Almost every field has its own peculiar circumstances; but as it is not our design in this place to enter into the minutiae of draining, but to introduce it as a first principle in farming, we shall say no more about it.

**Without draining, no improvement.**—Without it, no other operation can be effectual to the end proposed. When land is gorged with water, it cannot be cleaned. No labour is sufficient to do it, except in a very uncommon drought—in some soils not even then; and when land is not clean, it is impossible to suppose that dung, lime, or any other kind of manure, can have its full effect. Dung will promote the natural grasses more than any kind of grain which may be sown; and these, although the land is sown with artificial grass seed, will still thrive, and render the ground completely fit for a fallow crop, or, if on stiff clays, a summer fallow immediately after dirty lea oats.

**Cleaning.**—This department requires the Farmer's constant attention, and by this alone can be rendered effectual. Early ploughing is of much importance; and it is impossible to be too early at summer fallows, or in preparing the land for turnips or potatoes, when spring sowing is over. As we at present speak chiefly of land in the second stage of improvement, it must not be considered so clean as in future it may be expected. We shall suppose the land of a free nature, but extremely dirty by means of its late moist state previous to draining. Every Farmer may plough to his own mind, according to the nature of the soil, and the grass he has to destroy; but, in general, light ploughing is sufficient to kill grass, which generally runs near the surface—and then, before the manure is applied, a strong furrow is of much use, to mix new earth with the dung. At same time, some soils will not admit of a strong furrow, unless in the spring, before the moisture is exhausted. In such situations, harrowing, rolling, and gathering grass roots frequently after every ploughing, is essentially necessary; but it is not our design to teach either ploughing or harrowing.

**Manures.**—Neither is it our design to treat of the nature and properties of manures, and how they operate upon land,

so as to produce better crops; whether by communicating to the soil the vegetable food which they contain—whether by enabling it to attract nourishment from the atmosphere—or by enlarging the vegetable pasture which it contains—or by dissolving that which the soil already contains, so as to prepare it for entering the roots of plants. These are philosophical inquiries, not essentially connected with the present business. Upon this subject there are various theories—some of which are extremely rational, and others extremely absurd.

**Early sowing produces less straw than late sowing, and that in exact proportion to the times (ceteris paribus).**—The knowledge of this principle, which was not discovered, at least not attended to, till the close of the last century, is of much importance to the Farmer. Before it was known and practised, the hazard of sowing land in a very high state of cultivation was very great. Oats or barley sown in such condition at the usual period of seed-time as formerly—viz., oats late in March, and barley about the term of Whitsunday—would have been often entirely ruined by being too strong. English barley (commonly from Lincolnshire), and Dutch, and many other early kinds of oats, were adopted without changing the time of sowing; and as these have a tendency to produce shorter straw, they were found of much advantage in securing a full crop without lodging. But it is found that any of our oats sown early produce a shorter and stiffer straw, which has the same effect. Early oats, however, are still much in vogue. The Lincolnshire barley is almost out of repute: it is well known to some Farmers that the common Scotch barley is the best substitute for it—as, when sown early, its straw becomes shorter, much stiffer, and less apt to lodge. Potatoe oats are a comparatively new species, and are said to be natives of South America. It appears they were first imported into some of our midland counties of Scotland, in a quantity extremely small; and that they obtained their name from the circumstance of their arriving in a package of potatoes. This is a valuable kind of oats in point of meal, yielding two or three pecks per boll more than the Angus, which, in every other respect, we reckon our best oats. They appear to be again losing ground in the estimation of some people: they are more apt than any other kind to keep the soil, like wild oats, and thereby to annoy the succeeding crops. It seems to be apprehended that were they to be frequently shaken and

ploughed in dry, that they would be as great a weed too. They seem to have another disadvantage, which, in the present circumstances of our labour, is not a small one. They ripen along with the wheat: and that article being now more than ever the chief object of the Farmer, it is in danger of occasioning very serious consequences as to the timely cutting of that crop. Potatoe plants are also extremely apt to shake, and seldom fail to drop in shearing. All kinds of early oats are fit only for fine land, or land in a high state of cultivation; but upon inferior land they are the best, when a bad season has thrown the seed-time too far back for common ones. Blainslie oats are our native early, and have a finer meal as well as finer straw; but they seem mostly out of favour at present. These several varieties of oats and barley afford the Farmer great advantages in securing his grass-seeds, as well as his corn crop, in certain seasons and situations.

As to spring wheat, the dwarf kind, which is known to produce short straw, is also advantageous in the above circumstances; and as it has a natural tendency to produce short straw, it ought certainly upon rich soils to be preferred in winter.

*Picking out the best heads of the most approved grains, is the best method of preserving the species from degenerating.*

—It must be evident to every one that grain has a constant tendency to degenerate. But whether its species suffers or not, it must, by a thousand circumstances, be so blended and mixed with other kinds, and oven with different grain, that it requires frequently to be renewed by picking and propagating the best heads. This is found by experience to be the surest method of preserving the grain; and so different is the produce of the earliest and most vigorous ears from that of the poor diseased ones, that it has generally obtained some name to distinguish it from that even of its own kind. A Farmer in East Lothian some years ago found, in a cold, bleak situation (Coldingham Muir), a very fine looking vigorous head of wheat—which, being ripe at a period earlier than might have been expected from its situation, he brought with him; and having repentedly sown its produce, at last furnished seed to a considerable part of that county, and even to farms in many a distant county. It is an excellent kind of wheat—being considerably earlier and more prolific than any kind we are yet acquainted with. It is known as *Munter's Wheat*.

These hints may perhaps be of some use to Farmers who are only about the beginning of their agricultural pursuits. They may cause a little reflection, and occasion rational experiments, which may confirm, in their mind, the utility of such first principles upon which they were made.—E., *Ayrshire*.

Why is Tom Thumb not the smallest General in the world? Because in India there is a General *Littler*.

*From the Scottish Farmer.*

### A KNOWLEDGE OF THE THEORY OF AGRICULTURE NECESSARY TO ITS PRACTICAL IMPROVEMENT.

The prejudices entertained against what is termed Theoretical Farming, so extremely hurtful to the advancement and interest of the art, seem to arise in a great measure from very mistaken notions respecting it. An acquaintance with the real theory of Agriculture, is the knowledge of those general and fixed principles which ought to guide its practice. These principles are the result of long and repeated experiments—the nature and utility of which have been so proved, that, when directed to their proper objects, there is every reason to expect that they will not miscarry or disappoint their reputed fitness. The principle, that cleaning foul and weedy land is an essential preparation in cultivating, and in rendering the soil fit for the reception, the health, and vigorous growth of useful plants, is as firmly established as the correctness of any mathematical axiom.

But it is not here meant that it is a simple and easy matter always to perceive the proper and applicable principle which the case occurring may require. This is the stumbling difficulty. It is but in comparatively few instances where the use and connexion of the principle and its strict subject are so evident as they are respecting cleaning, draining, and manuring land; and, in the practice of Agriculture, there are a thousand different cases where the true principle is uncertain, and therefore the rigid observance of an inapplicable rule would be injurious. The principles and rules essential to most other arts are more determinate, and may be understood and illustrated in the chamber of an ingenious individual; but the art of Husbandry is a combination of so many facts,—a system depending for its accuracy upon such an extent of observation and patient experiment—that it is almost rash to anticipate such a precise system of rules, as can either be advantageous or applicable in every case. It is not easy to point out general rules, that can embrace in their use the endless varieties of soil, the difference of climates, the changeableness of seasons, and other local and incidental circumstances.

But what has powerfully contributed to increase the difficulty, is the incautious and preposterous procedure of many who have pretended to instruct by their systems, or who have unsuccessfully acted upon them. By so doing, obstacles have been raised which have greatly checked the progress of improvement. Agriculturists have been led to conclude, that between the knowledge of the theory and of the practice of Husbandry, there is no intimate nor useful connexion; and it has become a very prevalent opinion, that every idea or rule which is suggested as fitted to give general instruc-

tion, if not consonant with previous practice, and perhaps illiberal views, is nothing better than the fancy of some whimsical individual, and only calculated to attract the notice of those who have money to throw away in experiments, or to spend in amusement. Neither the difficulty, however, arising from the nature of the subject, nor the discouraging circumstance of theorists generally failing to frame applicable systems, ought to deter Agriculturists from perfecting the art, and attempting to discover better rules. General rules, capable of being reduced to a theory, undoubtedly may be laid down, which will in ordinary cases serve the same purpose which every other theory does in relation to its own practical department. Where Farmers proceed with proper caution, in making patient and lengthened experiments, their results must declare some fact useful to the art, and give rise to rules which a man of intelligence will act upon with advantage. The principles of Husbandry will thus become more determinate; and rules thus founded on actual practice, will declare, by striking evidence, their nature and fitness. This mode of studying Agriculture is attended with a multitude of advantages. Amongst the rest, it has the salutary effect of exciting the mind to exertion, and to inquiry concerning the subjects with which it is conversant. It can need no reasoning to prove that this is an advantage—a truth universally applicable to the advancement of any branch of knowledge. To husbandry, however, it applies particularly; for since the difficulties of making use of general rules are singularly great, there is so much more need for inquiry and attention—the uncertainty how principles should be handled, and the latitude which general directions must possess in their application demand the exertion and information of a master. In so far, therefore, as Farmers are wanting in this kind of knowledge, to such an extent is their practice deficient. The circumstance of a spirit of inquiry supposes a desire to improve by experiments, their knowledge and it has been to such exertions on part of Farmers through various districts of Scotland, that their present eminence is owing.

The experience of individuals is multiplied scientifically—the known and discoveries of many are collected the use of a few—and by the daily improvements that are made, the art becomes more regular and unexcitable.

Prejudices, however, will not permit men to give up ancient and unprofitable customs. It is said, "Our forefathers knew nothing of these new schemes, yet they were as happy and as well as we would wish to be; no good is seen to come of new plans, and of led and *book-taught* Farmers," &c. Needless to take notice of such chivalrous assertions. Those who are willing to know the real state of the question, will

and that Agriculture, as well as every other art, has prospered and been improved, in proportion as its principles have been inquired into and acted upon. Is it not all reasonable to suppose that Husbandry, which requires a high degree of attention and intelligence, is understood properly by men prejudiced against every new idea, ignorant of the nature of their own operations, and mere machines guided by early customs? It has been well said, "That a ploughman, or one who only goes through servilely the common course of Husbandry, can with no more propriety be denominated a Farmer, than an apothecary's porter can be called a physician." What else does he do, in his uniform, antient, and illiberal procedure, than recollect a few particular seasons and dates, and remember that such and such a work has always in his practice been performed at a certain period? Such an exhibition of the practice of husbandry would strike one with a sentiment very different from what is sometimes declared—"That Agriculture is the mother of arts." A very moderate degree of inquiry would lead men to see the folly and the injurious nature of such prejudices, if they are at all open to conviction; and no method whatever can be better fitted to produce this change, than the study of the improvements already made—the means used by which these improvements were brought round—and the rules deduced from them by men of experience, explained and enforced in cheap periodical publications.

A number of circumstances have indirectly prepared the Farmers of Scotland for profiting by information—such as the situation and laws of the country, the education and economical disposition of the people, the means of communication, &c. This information and knowledge, however, has been mostly derived from the exertions of men proceeding in the line of study and inquiry here recommended. Experiments made by individuals discovered properties and principles universal, or, at least, of very extensive benefit—treatises were written, in which were collected the various points ascertained—the Highland Society has diffused much useful knowledge—periodical publications have become the receptacles and vehicles of every new improvement in knowledge, thus accessible to every enlightened mind. The minds of Farmers, enlightened them with the ambition of excellence, and consequently was productive of the best results. A taste for the art became prevalent—it soon grew a fashionable employment—and men of the most liberal minds have contributed their exertions to the general interest of Husbandry; and in those districts of Scotland where this course has been followed, agriculture is conducted on the most enlightened principles, and to wonderful advantage. What a change is now to be seen between the present state of Scottish husbandry, and the view given of it by Lord Kames in his "Gentleman

Farmer!"\* "About forty years since," his lordship says, "Husbandry was sadly imperfect—our draught horses miserable creatures, without strength or mettle,—our oxen scarcely able to support their own weight, and ten going in a plough, led on by two horses—the execrable husbandry of *infield* and *outfield* generally established—the ridges high and broad, in fact enormous masses of accumulated earth, that would not admit of cross-ploughing—ribbing, by which half the land was left untilled generally—summer fallow creeping in,—and a continual struggle for superiority between corn and weeds." In this way he goes on; and it is remarkable that scarcely one of the improvements which Lord Kames suggested has failed of being now realised.

In several quarters of Scotland, the state of agriculture presents appearances in many instances little superior to the view given by Lord Kames. Draining neglected—three white crops following one another successively, succeeded by a hay crop, very prevalent; and many other practices similarly foolish and unproductive. The prejudices of these Farmers against every change are almost insurmountable; and, notwithstanding all the means of information afforded them, anything opposed to their early practices is rejected and treated with the utmost contempt. In many counties, both of the west and north of Scotland, perhaps not one out of fifty Farmers (especially those of the lower order,) have ever changed their practice from *proper* or rational motives. A treatise on Agriculture is treated as a volume of heresy, and its projector as a hurtful member of society; and even such periodical works as might at least gratify curiosity, or afford matter for conversation on agricultural subjects, are never perused, though a great deal more of both time and money be in too many instances given to indolence or dissipation.

\* The "Gentleman Farmer"—being a attempt to improve Agriculture on Rational Principles. First edition, 1776.



COBOURG, AUGUST 1, 1846.

This paper, when taken in connexion with the *Star*, will not cost the Subscriber anything additional, as we have determined to give the two papers for 15s. a year. If, however, it be taken separately, by itself, the Subscriber will be charged two and sixpence a year, payable in advance.

We beg to call the attention of our Subscribers to the proceedings of the London Farmers' Club, the publication of which is begun in this number. Much

valuable information has been given to the public by the gentlemen whose *practical experience* we quote; and we have no doubt but that when Township Clubs are once established in this District, we shall be able to lay before our readers information of equal utility resulting therefrom.

As this is the first number of the *Newcastle Farmer*, and having the proceedings of but one Club meeting to record, it cannot be expected that it should be filled exclusively with original reports. The discussion, however, of the London Farmers' Club given in this number upon the subject of "Manures," will be found worth the reading, and the Editors of the *Star and Gazette* have made arrangements for procuring the most approved old country Journals, for the purpose of assisting them, by extracts and otherwise, in making such remarks and comments upon the subjects discussed at the Club meetings, as may be useful. The Editors are no Farmers, nor is it necessary they should be for this purpose; and that they may not be misunderstood, they beg their readers distinctly to understand that this is not intended to be an "Agricultural Journal," but merely a memorandum, as auxiliary to the efforts now making to organize the Township Clubs, of days and places of meeting, and the reports of their proceedings.

Arrangements have been made by which it is to cost no more than the money actually laid out in purchase of paper, ink, and workmanship, which will not exceed 2½d. a number, and it is not thought that any farmer will grudge that small sum, if it were merely to be informed of the time of meeting in his Township, and the subject to be discussed. To those Farmers within the Newcastle District who may favour us with their names as Subscribers to our newspaper, the *Newcastle Farmer* will be sent *gratis*, and it is hoped that the great sacrifice which we thus make in labour and money, will be appreciated on the part of all the Farmers of this District, and that they will encourage us by becoming Subscribers.

It is, we understand, intended that each Club will appoint an efficient Secretary, whose duty it shall be to furnish a Report of the proceedings of each Meeting for publication, similar to the one which we give in this number for the Township of Hamilton; and in addition to this we shall be happy to receive and to publish,

as far as our limits will allow in the *Farmer*; communications relating to our local agricultural matters.

### THE LONDON FARMERS' CLUB.

*From the Farmers' Journal.*

#### THE ECONOMY OF MANURES—THEIR MANUFACTURE AND APPLICATION.

The usual Monthly Meeting of the Farmers' Club was held on Monday week.

Mr. BAKER, of Writtle, Essex, occupied the chair, and stated that the subject of their discussion, for this evening was "The economy of manures, as regarded their manufacture and application." At the time the matter had been selected for discussion, Mr. Cuthbert Johnson, who, from his scientific acquirements, was more conversant with all its bearings than any other member, had been requested to take the lead in the question, and he had very handsomely consented to do so. He was quite sure they would listen to him with a vast deal of pleasure and be highly gratified in having a gentleman of such distinguished talent to bring the matter before them.

Mr. CURTISS JONSON immediately rose and said—Mr. Chairman and gentlemen, I respond to the call made upon me to bring the subject of this evening's discussion before you with every possible feeling of alacrity; but I wish to state at the beginning that when the card was put into my hands, and when I came to examine the terms of the question, I was rather puzzled as to how I should best direct my attention to the subject. My difficulty arose not from a feeling that I should not find enough to say upon such a subject, but rather in arranging it so as to bring it within the limits of any ordinary discussion of this club. Therefore, by your permission, I will confine myself to the consideration of the manure of the farm yard, its economy and application. The question then, gentlemen, which the Committee of the Farmer's Club have adopted for discussion this evening is one which they have justly considered to be of the highest practical importance, a conclusion in which I beg most warmly to concur, because it must be quite evident to every one connected with the cultivation of the soil, that upon the proper manufacture and the economical application of the manure of the farm yard rests the success of all great agricultural efforts. My attention this evening shall be directed to a few chemical results which have been recently obtained relating to the subject, and to the illustration they afford of the farmer's practical operations. The subject of this evening's discussion having been divided into two sections, the "manufacture" of the manure of the farm yard first demands our attention. We shall, in furtherance of our object, simplify our investigation, if we divide this examination into two sections—First the vegetable portion of the manure, and, secondly, that which is composed of the excrements of animals.—

Now, as regards the vegetable portions, it is evident to every one that it is the straw of various grain that forms the largest portion of these—substances of little value as fertilisers, until mixed with the excrements of animals. It has been found, however, that the same quantity of straw of different cereal grasses, consumed as food by live stock, produces very different weights of manure. It has been a common phrase that "straw is straw," and many do not know that if a given weight of rye straw, or hay or corn is used, there is a material difference in the weight of manure produced, as has been determined experimentally by M. Block. He ascertained that 100 lbs of chopped rye straw, given as food to horses, will yield about 42 lbs of dried excrements (fluid and solid,) 100 lbs of hay will yield about 45 lbs, 100 lbs seeds of rye 53 lbs. The proportion of excrement produced by various animals naturally varies with the size of the animals, and the food on which they are fed; but it has been calculated from results of various experiments that an ordinary bred cow fed in the usual way, produces about nine tons of solid dung in the course of a year. Upon this part of the subject you will find much valuable information in a blue book recently printed by the Government, the real object of which is to support the continuance of the Malt Tax, with the ostensible one of affording information to the farmer. Throwing, however, to the winds the real object for which the volume has been published, and the arguments it is intended to support, to which a complete answer might readily be found; throwing to the winds, I say, that object, there yet remains in the hundred folio pages of which the book consists, a great deal of instruction, highly valuable to the accomplished agriculturists of England. I therefore recommend those who are managers of Farmers' Clubs to apply to the proper office, and they will doubtless be furnished with a copy for the use of their institutions; a book so full of valuable information, relative to the respective qualities of excrements, that it will repay a perusal—I mean in a scientific point of view, and not as having any relation to the Malt Tax. In the recent experiments of Dr. Thompson upon the fattening properties of malt and barley, he found that in fourteen days a cow, consuming 1426 lbs of grass produced exactly 1000 lbs of dung—*Parl. Paper*, p. 45.) But when the same cow was fed for sixteen days on 3 lbs. of barley, 168 lbs. of malt, and 472½ of hay, she produced 1259 lbs. of dung.—(*Ibid.*, p. 47.) Again, the food of this cow was varied; she was fed during ten days with 90 lbs of barley, 27 lbs. of molasses, and 274 lbs. of hay: the dung she now produced weighed 866 lbs.—(*Ibid.*, p. 49.) She was then fed for ten days with 80 lbs. of barley 40 lbs. of linseed, and 249½ lbs of hay, she now produced 795 lbs. of dung.—(*Ibid.*, p. 49.) This gives the propor-

tion of solid excrement voided by a cow. Other persons have, in various experiments, investigated the amount of dung produced from a given weight of food and fodder taken together, and the results of one of these series of experiments, have been given by Professor Johnston, in his valuable work, "The Elements of Agricultural Chemistry," p. 140. From these it appears that one ton of dry food and straw gives a quantity of farm yard dung which weighs,

When recent from	46 to 50 cwt.
After six weeks	40 to 44 "
After eight weeks	38 to 40 "
Half rotten	30 to 35 "
When pretty rotten	20 to 25 "

So that we see from these experiments that when only half rotten, farm yard dung does not weigh more than one half of what it does when in the recent state. This loss of weight is caused partly by the evolution of a quantity of gaseous matters of putrefaction, and partly by the aqueous matter drained from the heap, or emitted in the shape of steam; a loss which can easily be diminished in amount although not prevented even then in a considerable degree, by employing the manure of the farm yard in as recent a state as possible. The condition in which manure ought to be applied to the land, in what state of putrefaction or decomposition, is a point of the very highest importance, one well worthy of investigation by this society, and upon which the more knowledge is brought to bear the better. There is practical question, namely, the state in which the farm yard should be kept during its manufacture, and the value of the compound produced. A great many of the farmers in my neighbourhood, in the county of Essex, believe that the farm-yard cannot be kept too dry; and that was the opinion of a great farmer in Dengy Hundred, a tenant of the celebrated Mr. Cline, the surgeon, for he covered in the whole of the farm yard with a roof. He, therefore, was clearly of opinion that to have manure in as dry state as state as possible was most productive, and that it insured a manure of the most fertilising description. Others, however, are of a very different opinion. This leads me to another portion of the inquiry, as to the most desirable state of dryness or of moisture in which the dung of a farm yard can be kept while preparing. On this important point I have received very discordant opinions from practical farmers: many contending that it can hardly be prepared in too dry a state; whilst others have stated to me as their decided opinion, that if the escape of all drainage from the farm yard is prevented, that then the dung can hardly be too wet. There is certainly in favour of this latter conclusion the result of some recent experiments by the celebrated German chemist, Sprengel, which would lead to the conclusion that at least the putrid urine of the farm yard becomes very considerably richer in ammonia when previous-

mixed with a considerable portion of rain water. This discovery shows the value of experiments, even when it may be thought that those researches can hardly lead to much good. For if any chemist had been asked, if by mixing a quantity of water with urine and then putrefying it, such a process would add to the bulk of ammonia, that the chemist would most unhesitatingly have answered "No."—But that it does increase the bulk of the ammonia, and that not a small, but to a considerable extent, is beyond dispute.—Now, upon the quantity of ammonia contained in farm yard manure, its fertilising powers to a very considerable degree depend. M. Sprengel analyzed urine in three different states—1. When fresh. 2 After been putrid by itself. 3. After being putrid and previously mixed with its own bulk of water. When fresh, 100,000 parts he found to contain 205 parts of ammonia; but after putrefaction this proportion of ammonia was increased to 487 parts, or considerably more than doubled; and then watered previously, it was then found to contain, after putrefaction, 1622 parts of ammonia, or nearly eight times the quantity it did when fresh. The following are the results of his analysis:—

	Fresh.	Putrid.	Watered.
Urea,	4,000	1,000	600
Albumen,	10	—	—
Mucus,	190	40	30
Benzoic acid,	90	250	120
Lactic acid	516	500	500
Carbonic acid	256	165	1,533
Ammonia,	205	487	1,622
Potash,	664	664	664
Soda,	554	554	554
Silica,	36	5	8
Alumina	2	—	—
Oxide of iron,	4	1	—
Oxide of manganese	1	—	—
Magnesia,	36	22	30
Chlorine,	272	272	272
Sulphuric acid,	405	338	332
Phosphoric acid	70	26	46
Acetic Acid	—	1	20
Sulphuretted hydrogen,	—	1	30
Insoluble earthy phosphates and carbonates,	—	180	150
Water	92,624	96,444	95,481
	100,000	100,000	100,000

These experiments seem to me to bear directly upon the question of the dry and wet preparation of manure—a point so important to be well understood that I should be glad to hear the opinions of those who will follow me in this discussion upon it. The more carefully in fact we investigate the question which is the subject of this evening's discussion, the more important does it appear, and the more numerous the sources of loss to be guarded against. For, as I have elsewhere remarked—Nothing appears at first sight so simple as the manufacture and collection of farm-yard dung, and yet there are endless sources of error into

which the cultivator is sure to fall if he is not ever vigilant in their management. The late Mr. Francis Blakie, in his valuable little tract on the management of farm-yard manure, dwells upon several of them; he particularly condemns the practice "of keeping the dung arising from several descriptions of animals in separate heaps or departments, and applying them to the land without intermixture. It is customary," he adds, "to keep the fattening neat cattle in yards by themselves, and the manure thus produced is of good quality, because the excrement of such cattle is richer than that of lean ones. Fattening cattle are fed with oil cake, corn, Swedish turnips, or some other rich food, and the refuse and waste of such food thrown about the yard increase the value of the manure; it also attracts the pigs to the yard; these root the straw and dung about, in search of grains of corn, bits of Swedish turnips, and other food, by which means the manure in the yard becomes more immediately mixed, and is proportionately increased in value. The feeding troughs and cribs should, for obvious reasons, be shifted frequently. The horse dung is usually thrown out at the stable doors, and there accumulates in large heaps.—It is sometimes spread a little about, but more generally not at all, unless where necessary for the convenience of ingress & egress, or perhaps to allow the water to drain away from the stable door. Horse dung lying in such heaps very soon ferments, and heats to an excess; the centre of the heap is soon charred or burnt to a dry white substance provincially termed "fire-langed." Dung in this state loses from 50 to 75 per cent. of its value. The diligent and attentive farmer will guard against such profligate waste of property by never allowing the dung to accumulate in any considerable quantity at the stable doors. The dung from the feeding hog-sties should also be carted and spread about the store cattle yard in the same manner as the horse dung."

The enrichment of the farm-yard manure by improving the food of the live stock kept in it. This is a question peculiarly interesting not only to the tenant farmers, but to the farmers' landlord. For when it is generally known amongst the landlords of England how much the quality of the manure is improved by the use of superior food, they will then see very speedily that it is the most wretched policy to discourage, or restrain, by a covenant in the lease, the exchange of straw

\* There is no doubt of the superior fertilizing effects of horse dung. In an experiment with beans, in which six acres were manured with horse dung and nine with that from a cow yard, the six yielding more than the nine (Agri. Report of Essex, vol. ii., p. 180.) The same observation was made in Lincolnshire (Sinclair's Agriculture, p. 214.) The heat produced by the fermentation of the dung of different animals has been made the subject of repeated experiment, (Farmer's Magazine, vol. iv., p. 160.) When the temperature of the air was 40 deg., that of common farm-yard dung was 70 deg.; a mixture of lime, dung and earth, 65; and a mixture of swine and fowls' dung, 58.

and hay, for good dung made by corn-fed animals, one which in very many instances the farmer could effect with equal advantage to his own pocket and to the high cultivation of his land. Now the questions of the highest importance which are originated and discussed by this club are questions which should aid in the diffusion of knowledge not only among the farmers of England, but among the farmers' landlords; because I am perfectly aware that whatever goes on in this club, will, through the usual public channels, find its way into their studies; and I hope that every niggardly landlord in this country (that is, supposing that such a person as a niggardly landlord does exist in England), will consider whether it will not tend to the eventual enrichment of his own pocket if he omit all covenants from his leases which prevent the farmer from exchanging straw or hay for far better manure than he can readily make, and whether it would not be to that landlord's own interest to increase the quality of the manure now made in the straw-yard by the employment of oil cake and other food which would produce manure of a highly superior nature. Of course, when the landlord is once convinced of the soundness of this policy, this result will follow; he will take care to have no covenant introduced in his leases which will militate against such a practice, but see that if the tenant has not, by the custom of the district, a right, to be paid for any outlay for oil cake, such a custom ought at once to be adopted; and if he cannot prevail upon his fellow landlords to give to their tenants what for shortness are called "rights," that he will at least provide that his own out-going tenant shall not be discouraged from employing oil cake manure, from the fear that when he leaves his farm he will not be compensated for it. I earnestly hope these discussions will lead to a better general feeling on this subject on the part of the landlords, and lead them to perceive that the more liberally they agree to pay their tenants for any unexhausted improvements with regard to manure, the better it will be for their own interests. Gentlemen, I was just saying that it was the most wretched policy to discourage or restrain by covenants in the lease, the exchange of straw and hay for good dung made by corn-fed animals, and I need hardly remind the farmers assembled in this room of the inferiority of the manure made by the lean stock of the straw-yard to that produced by the corn or cake-fed stock of the stable or the bullock-houses. The increased value of manure made by stock fed with oil cake is considered by the farmers of my neighbourhood in Essex to be equal to one-half of the oil cake employed; and so well convinced of the importance of encouraging the farmer to enrich the manure of the farm yard are Lord Yarborough and many other of the great and enlightened landlords of Lincolnshire, that they have wisely en-

couraged their excellent tenants to use oil-cake, by allowing them for one quarter of their outlay for all the cake used for fattening their stock during the last two years of their tenancy. They wisely avoid the error into which by far too many landlords are at present led in the valuation of the manure belonging to an out-going tenant, viz., that of regarding us of little consequence the quality of the food consumed by the stock which produced it; a delusion which I hope will speedily pass away when the landlords of England shall better understand, as regards the preparation of manure, their own true interests. To assist in this very desirable object, I would earnestly refer the landlords to a very valuable paper, which both the farmer and landowner can hardly read too often, by Mr. Williams, Lord Yarborough's agent, on "The Tenant's Right to Compensation for unexhausted Improvements;" for its perusal will not only suggest several facts which it would be well if those connected with the tenure of land more constantly kept in view, but it will also give valuable support to one of the questions I am so anxious to impress upon the farmers of England, viz., the false economy of preparing only straw-fed manure. Mr. Williams's paper is inserted in the "Journal of the Royal Agricultural Society of England," vol. vi., p. 44. He remarks, when speaking of what he well describes as the increasing importance of the subject, "The allowance (founded not on custom, but on special agreement) is based on the assumption that the manure is improved to the extent of half the value of oil cake consumed; but to get a fair average of both quality and price it is made to extend over the last two years, and the allowance is two sixths of the cake used in the previous year, making together the half of a year's consumption." This clearly shows that among the noblemen and gentlemen to whom I have alluded no doubt is entertained of the advantage of encouraging an improvement in the quality of the manure of the farm yard, and I think it is a question which can hardly be discussed too often, or to be too frequently brought under the attention of the landlords.—Having thus rapidly glanced at some of the chief sources of improvements to be adopted in the manufacture of manure, the next division of my subject includes, according to the terms of this examination, the economy of its application.—This is a division of my subject which is of the highest importance to the cultivator; it is one great branch of the farmer's endless avocations in which great losses are necessarily sustained, yet still more are incurred by needless neglects and want of consideration. For amongst the many sources of loss, we find that in too many instances the application of the manure is delayed until putrefaction has generated and involved a large portion of the richest ingredients of the manure.—Surely in many instances this loss might

be prevented, but the practice unfortunately does not end here; the manure is carted from the compost heap, copiously emitting a stream of gaseous matters, which would if involved in soil prove highly fertilizing to the growing crops. Its exposure to the atmosphere, when spread over the land, adds still more to the mischief; the sun and the winds conspire to reduce its value, until, when it is at length ploughed beneath the surface, its best, its most fertilizing portions have departed; and if this is the loss sustained by manure applied to arable soils, how much is that loss multiplied when the compost of the farm yard is spread over the surface as a top dressing to grass lands! How small a portion is absorbed by the growing crop, how large a portion destroyed by the combined action of the sun and the atmosphere! Now it appears to me that a remedy may be found for this loss; some implement surely can be produced, somewhat similar to the sub-turf plough, which shall by some simple improvement enable the holders of pasture lands not only to loosen the soil of grass lands, but, at the same time that this beneficial operation is effected, to deposit either well rooted compost or some of the drill manures beneath the surface of the land. By this plan the decomposition of the manure being rendered much less rapid, and applied in immediate juxtaposition to the roots of the grass, its elements are as gradually absorbed and assimilated by the growing plants as they are produced; protected from the action of the sun and winds, every product of decomposition is turned to good account, and consequently a much smaller portion of the fertilizer employed is needed to produce a required result, than by the common wasteful mode of spreading it on the surface, even aided as it commonly is by the very imperfect and ineffectual attempts to bush-harrow or roll it into the land. By such a mode of application too as that to which I have alluded, the use of the manure is very materially economized, for it is a means of extending a given weight of manure, over a much more considerable extent of the land than is practicable on the ordinary surface-dressing mode. And when we reflect upon the small proportion per acre of bono dust, of rape cake, and of other finely divided organic fertilizers, which are successfully applied by the drill, we can hardly avoid the conclusion that it is more than probable that by new and more economical modes of application, great improvements are yet to be made in respect to the use of farm yard manure. I have been induced to lay great stress on the wasteful application of farm yard manure when used as a top dressing for grass, by having my attention drawn to the wasteful manner in which such manure is applied in my own neighborhood. It is brought down from London in large quantities, and after being put in a pile and turned over is then spread upon the land; the attention of those who are

farmers and of those who are not is drawn to it by the odious stench which it emits, (for it is mixed with a great quantity of the night soil of London, an admirable dressing for grass lands,) and they are soon acquainted through their noses that an agricultural operation is going on. This smell shews that a mixture of ammonia and sulphuretted hydrogen is being evolved from the manure, which by being dispersed is lost to the land, and lost to the grass, to which it is naturally so admirable a food. Now, if that ammonia, that sulphuretted hydrogen, could by any process be brought under the surface, the roots of the grass would absorb it as it was evolved, decomposition would be retarded, the gas would be evolved more slowly, and consequently evolved in such quantities as are not beyond the powers of the growing crops to consume. I therefore venture again to suggest that surely some implement may be constructed, that something like the sub-turf plough might be contrived, which would not only loosen the soil (a most excellent operation in the case of grass lands), but should also at the same time bring and bury under the surface the well rotted manure of the farm yard—some of which might be prepared on purpose for the operation; and although it is commonly believed that organic manures must, to produce beneficial results, be strewn on the land in large quantities, yet long continued experiments have convinced me that the usual amount of organic manures may, to the interest of the farmer, be very materially reduced in bulk. I am quite sure indeed, from experiment, that the application of manures to grass lands in particular may be very materially improved in the way I have suggested. I have, Mr. Chairman, thus rapidly touched upon the chief points in the manufacture and economy of farm yard manure, which appeared to me to be most likely to be productive of good in a discussion by the members of the Farmers' Club, and I trust that these imperfect observations will be the means of drawing forth the practical observations of those whom I see around me. The importance of the subject, I feel, can hardly be overrated; it branches out into so many divisions, that I have ventured to touch upon one or two only, leaving it to others to enlarge upon my imperfect notices, and to supply my manifold omissions. In conclusion, I have only to thank the members of this club for listening so patiently to me during the time I have occupied their valuable attention, and if the observations I have made should have the effect intended, viz., that of drawing forth the remarks of the able practical men present in this room, my very humble efforts will be most abundantly rewarded. (Loud and hearty cheers.)

(To be continued.)

We have received from the President of the Northumberland Agricultural So-

ciety the following extract from a letter written to him by the Secretary of the Durham Agricultural Society, which, in allusion to the formation of Township Clubs and the good likely to result therefrom, states: "We of this County, (Durham) have lately organized ourselves into Township Societies as branches of the County Society, wherein premiums &c. are awarded for different kinds of produce &c. But I am sorry to say that no discussion of the merits of any particular branch of agriculture is at any time brought forth, as by such means more real knowledge in many cases is to be obtained."

We have also received through the Secretary of the Durham Agricultural Society, a list of the Township Directors of that Society, whose names we publish below:

- PRESIDENT,**  
Honourable W. B. Robinson.
- VICE-PRESIDENT,**  
William Allan, Esq., *Hope.*
- TREASURER,**  
William Sisson, *Hope.*
- SECRETARY,**  
Samuel Wilmot, *Newcastle.*
- DIRECTORS.**  
*Hope.*

- |                  |                  |
|------------------|------------------|
| Robert Fortune,  | K. McKenzie,     |
| Charles Hughes,  | James Smith,     |
| Sam'l Dickenson, | Aaron Choate,    |
| George Lyall,    | John Might,      |
| Robert Bedford,  | Alex. Morrow,    |
| Edmund Milson,   | James Lowe,      |
| Sam'l Scammans,  | Nathan Choate,   |
| James Lang,      | J. W. Cleghorn,  |
| David Milliken,  | Alex. Broadfoot, |
| John Agar,       | Myndert Harris.  |

- Clarke.*
- |                  |                |
|------------------|----------------|
| John Robson,     | John Pearce,   |
| Allan Wilmot,    | John Brown,    |
| Wm. Mitchell,    | Horace Foster, |
| George Wylie,    | Edward Clarke, |
| Bradford Bowen,  | John Beavis,   |
| Henry Munro,     | James Lorikin, |
| John Middleton,  | William Brock, |
| James Blackburn, | G. A. Jacobs,  |
| Lotrop Smith,    | Chas. Tamblin, |
| Herbert Renwick, | Wm. McIntosh.  |
- Darlington.*

- |                   |                  |
|-------------------|------------------|
| Robt. Fairbairn,  | James Mann,      |
| David Burke,      | J. C. Trull,     |
| John Simpson,     | Hiram Boreland,  |
| Ira Burke,        | John Galbraith,  |
| Daniel Galbrnith, | Wm. Lauriman,    |
| Donald Cameron,   | George Lauriman, |
| Matthew Jones,    | Peter Lusk,      |
| Ira P. Wilson,    | John Wait,       |
| Robt. Beith,      | Richard Allan,   |
| B. Mitchell,      | John Smart.      |

- Manvers.*
- |                |                  |
|----------------|------------------|
| Alex. Preston, | Henry Jones,     |
| Wm. Grahame,   | Robt. Gillis,    |
|                | Richard Staples. |

*Cavan.*

- |                |                |
|----------------|----------------|
| John Knowlson, | Wm. Lough,     |
| Thos. Best,    | Wm. Armstrong, |
| John Myers,    | Wm. Dawson,    |
| John Swain,    | Wm. Ayers,     |
| Robt. Grahame, | Wm. McNish.    |

Thos. Syors,  
*Cartwright.*

- |               |                   |
|---------------|-------------------|
| James Caesar, | John Bruce,       |
|               | Matthew Emmonson. |

LIST OF OFFICERS OF CLARKE AGRICULTURAL SOCIETY.

**PRESIDENT,**  
Henry Munro, Esq., *Newcastle.*

**TREASURER,**  
John Robson, *Do.*

**SECRETARY,**  
Samuel Wilmot, *Do.*

**DIRECTORS.**

*Clarke.*

- |                 |                   |
|-----------------|-------------------|
| Moses Thompson, | Theron Dickie,    |
| Richard Paseoe, | Lotrop Smith,     |
|                 | William Mitchell. |

*Newcastle.*

- |                     |                 |
|---------------------|-----------------|
| Jas. Blackburn, Jr. | Wm. Renwick,    |
| William Brock,      | John Gilbank,   |
|                     | Bradford Bowen. |

The Report of the proceedings of the Hamilton Township Club Meeting for July, is, we regret to say, not so full as we could have wished. It nevertheless contains some useful hints on the preparation and use of manures.

TOWNSHIP OF HAMILTON AGRICULTURAL CLUB.

*Subject for discussion, MANURES, their preservation and application.*

Pursuant to public notice given by the Township President, the first Meeting of this Club was held at the Town Hall in Cobourg, on the first Saturday in July. The Chair was taken by Mr. Wade, the Township President, and Mr. Crofton acted as Secretary. After some preliminary conversation—

MR. RUTAN rose to explain the objects contemplated by the establishment of these Clubs. He contended for organization among the Farmers, who, it appeared to him, were the only class who did not confederate for mutual benefit and advantage. He dwelt forcibly on the peculiar necessity which exists at the present time of some steps being taken to insure co-operation, and a recognition of the claims which the Farmers have upon the protection of the Government; and this he thought could only be brought into effect by the establishment of Clubs such as that now proposed, in every Township; and although many difficulties stood in the way, and many discouragements presented themselves, chiefly in the apathy which seemed to press down those most interested, yet he was not discouraged when he saw influential men, good practical Farmers, put their shoulders to the wheel.

MR. JELLET deduced an instance of

what might be effected by perseverance, from the establishment of the Belfast Natural History Society, of which he gave an entertaining account, tracing its progress from a meeting of three or four persons to its arrival at the honour of being one of the first of its kind in Ireland. He then proceeded to offer some remarks on the application of manures, founded on the principle that no manure was so good for any crop as that which was the produce of the crop itself. He had been led to try bran as a manure for turnips, and had found it succeed beyond his expectation. He detailed the process at some length, and stated his determination to carry out the experiment, and read some extracts from Reports of Agricultural Meetings in Ireland, at which sufficient testimony was borne to the absolute necessity of paying attention to manures.

MR. EYRE highly approved of the principle of Farmers' Clubs, and thought steps should be taken for the purchase of a Model Farm, where the various experiments could be tested and carried out with efficacy. Farmers did not in general much like the idea of new experiments, where success was frequently more than doubtful, and whose failure entailed a loss which often fell heavy on the farmer; another suggestion which he offered was the establishment of a Farmer's Library, as many of the best agricultural works were far too costly for the generality of farmers; and he had little doubt but if a taste for reading were once introduced, much benefit would be derived therefrom.

MR. WADE detailed the effect of an experiment which he had tried on a piece of land on which he had sown wheat,—part of which he had manured, to render it equal in richness to the remainder, and found the effect to be most advantageous. Indeed, he said, it was his opinion that without proper attention to a regular system of manuring, the farmer could have little hope of success.

MR. PHILLIPS felt pleasure in coming forward to support Clubs organized on the plan now adopted; he thought that by thus meeting and talking over matters, each giving a detail of his own experience, that the farmers would not only derive benefit from the interchange of information, but be excited to redouble their efforts for improvement, and a spirit of honest rivalry be established. Mr. P. then proceeded to give the history of an experiment, accidental on his part; he had one patch of land of a very inferior quality, burnt up as it were, and totally unproductive; on this he spread a heap of mixed rubbish, in which were lime and wood-chips; and he found its effects greater and of longer duration than that of barn-yard manure.

The conversation after this became general on a variety of subjects, particularly as to the best method of preserving manures, and at what time they could with best effect be spread, whether while quite fresh or after fermentation in the



barn-yard; and it seemed to be the general opinion that in this country, where labour was high, and consequently proper care could not be taken to prevent the admixture of foreign seeds, the best plan was to allow it to ferment. Another question arose as to the proper period to cut grain in,—which of the three stages, "turning," "ripe," or "dead ripe,"—and at the request of those present, Mr. Wade agreed to read, at the next meeting, a paper on the subject.

This was on the whole a most interesting and instructive meeting, and we regret that we cannot give a more accurate account. We agree with Mr. Rutlan as to the necessity of some system of organization, confident that without it the rights of the Farmers will be slighted or neglected altogether; and we trust that the opportunity now offered will be embraced by all.

For the Newcastle Farmer.

## TO THE FARMERS OF THE DISTRICT OF NEWCASTLE.

GENTLEMEN,—

I am happy to avail myself of the medium of the *Newcastle Farmer*, in order to say a few words in commendation of the decision of the Directors of the Agricultural Societies of the Counties of Northumberland and Durham, in attempting the organization of Township Farmers' Clubs, somewhat after the plan pursued in the old countries and United States.

Experience is the best teacher, and if the experience of the Farmers of Upper Canada for the last few months fail to awaken them to their present condition and future prospects, then I can only say that any further efforts on behalf of the Agriculturalists will be but in vain.

A great many people blame the Government whenever measures militating against the agricultural interests are taken. It is not the fault of the Government, Gentlemen, it is our own fault.—The Government, whilst it hears from every other class of inhabitants,—whilst it receives addresses and Petitions from the Boards of Trade, from Lawyers, Ministers, Merchants, Mechanics, Forwarders, and all sorts of Associations,—never hears from the FARMERS. They do not appear to be known as a body at all, and how can the Government act unless upon such information as is laid before it?—What wonder, then, that the particular interests of the Farmer should be swallowed up, and he stand as an individual unknown?

A Provincial Agricultural Society is about being organized at Toronto in this month, and we of Northumberland have deputed our talented Secretary to meet the Deputy from the other Counties. If this be accomplished, then the Farmers will be in a position to make themselves heard. But in order to give it efficiency as the Farmers' organ, the County Societies must be efficient, and their efficiency depends very much upon the organization of Township Clubs.

So much for our civil standing as a body. As to the consequence of these Clubs to our improvement in the science of Agriculture, they are in my opinion of the very last importance, and lay at the very bottom of our prosperity.

"As iron sharpeneth iron," so the mind in collision with mind will improve the understanding; and it is only in these social meetings that we can have this communion. Should we not, then, Gentlemen, consider it rather as a privilege than a hardship to spend a few hours once a month, and perhaps a few shillings a year, in order to gain information so vital to our prosperity? There is no Farmer so perfect that he will not find it advantageous to attend, nor is there one so ignorant as that some new idea will not be suggested by him.

There are farmers now in Canada who, so far as regards the management of a farm, and even in scientific attainments, will compare favourably with some of the best in the old countries; and I am sure all those will feel it a great pleasure to attend, and impart some of their knowledge to, and encourage by their presence, these Associations.

Let, then, the Farmers of the two sister Counties of this District, Durham and Northumberland, make a "long pull, a strong pull, and a pull altogether," for the establishment of Township Clubs. Recollect that "Union is Strength," and without it we must expect to remain, although forming nine-tenths of the population of Upper Canada, as a body, isolated and unknown, and occupy a position, instead of the front, in the rear rank of all the various other classes forming the population. Without improvement in our social condition and in our knowledge of husbandry, so in the same proportion must we expect *hard labour, small crops, and low prices*,—and last, though not least, without weight as a body, either political, civil, or social.

As a Farmer merely, Gentlemen, I have no right to address you thus, for I acknowledge that I am a very poor one, but it is because of the deep interest I take, and have always taken in the Agricultural improvement of the country, and from the circumstance of the official situation which I have the honour to hold in the County Society, that I have presumed to come before you with these remarks.

I have, &c.

H. RUTTAN.

Cobourg, 13th July, 1846.

For the Newcastle Farmer.

TO THE PRESIDENT OF THE NORTHUMBERLAND AGRICULTURAL SOCIETY.

SIR,—I have been much surprised to learn from a member of your Committee, that at a late meeting of the Directors a sum of money, (far exceeding any former amount for the purpose,) has been voted as premiums on Stock to be exhibited at a Cattle Show in October next.

I certainly had indulged the hope that the fallacy of such a proceeding had been made sufficiently apparent, as not answer-

ing the end for which it has been adopted; for while thorough-bred Stock is allowed a premium, it is (under present circumstances) merely fostering a monopoly,—such Stock being in so few hands, that there is in fact no competition; nor are the members of the Society, or the farmers of the County, benefitted to a tithe of the amount which they would be by a different application of the funds.

That any person going to the expense and trouble of importing Stock of improved breed, is worthy of encouragement and ought to be supported by the Society, must be granted; but the question is, whether more cannot be done by the means at the command of the Society.

We have had improved Stock in our vicinity for some years,—how many thorough-bred females of that Stock, (say heifers and ewes,) have ever passed into other hands from the original owners? very few I believe, *if any*, and if so, how can the flocks and herds of the members of the Society ever get much beyond a half breed, which never can by any possibility enter into competition with the full blood?

It is idle to talk about every person having an equal opportunity with others of importing Stock; the main question is, Has the end been answered hitherto by the means already adopted? I contend not,—and would respectfully submit for your consideration a few remarks.

I believe I may safely affirm, that within a very few years no less a sum than £300 has been expended in premiums on Stock; now, Sir, had this amount been laid out in the purchase of *young*, thorough bred cattle and sheep, &c. and sold again to the members of the Society, say even at a loss, of twenty-five per cent., (although that would not necessarily follow,) and the produce of the sale again invested in new purchases, and sold as before, the process to be repeated so long as any money remained, it will be found by making the calculation, that Stock to the amount of nearly twelve hundred pounds would have been distributed throughout the country; and the whole of the members of the Society might have been in the possession of Stock of a superior quality, and at a very inconsiderable outlay of trouble and expense, we should have had a vast accession of members, and the amount in aid from Government, would have enabled the Society to purchase successive supplies of the very best animals to distribute throughout the County, beside giving handsome premiums for a Cattle Show worthy the name, with reasonable expectation of fair and active competition. I am, Sir,

Your's most respectfully,

A MEMBER OF THE SOCIETY.

Hamilton, June, 1846.

TOWNSHIP CLUB MEETING.

HAMILTON.—1st Saturday in September, at the Town Hall, in Cobourg, at 4 o'clock, P. M.—Subject for discussion,—*Fall and Spring Ploughing*.

Published by CHATTERTON & RUTTAN, at "The Cobourg Star" Office.