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From the Irish Farmers' Journal.

ON THE MANAGEMENT OF CATTLE.

This subject now demands much of the attention of the Farmer, and at the present time a few words on the subject will not be out of place. This differs in some respects according to the kind of live stock and the object in view. The treatment of young animals should be different from that of animals being fattened. On the treatment of each of these classes we shall, therefore, offer a few observations. In the case of the fattening animals, the acquisition of flesh is the sole object in view, and the treatment to be adopted will, of course, be that best calculated to facilitate that end. In the selection of food the circumstance of one portion of it being appropriated in the formation of muscle or flesh, as distinguished from fat, should be taken into consideration, as by so doing, not only may the animal be rendered sooner ready for the butcher, but meat of better quality may also thereby be produced. This latter point is too little regarded by the feeder, whose sole anxiety is usually confined to secure the acquisition of flesh as quickly as possible, without any reference to quality. This course, however, insures the production of meat of very inferior value to the consumer, and for which, as a matter of course, a lower price must be paid to the feeder. The force of this observation will be apparent to those who have witnessed the regular intermixture of fat and lean, which prevails in the London market even in the case of the fittest animals, or those which have laid on the largest amount of flesh in proportion to their size. This judicious intermixture arises altogether from a proper selection of food. The immense masses of fat, without almost any intermixture of muscle or 'lean,' as it is called, are produced by confining the animals too much to food in which starch forms a principal ingredient, starch and the fat of animals being altogether composed of the same elements, both being distinguished by the absence of nitrogen. When we wish, therefore, to produce those alternations of fat and lean, so much to be desired, it is apparent that we should also supply food rich in nitrogen. Of the ingredients suitable for this purpose, bran, pea and bean meal, and oil cake, are, probably the most valuable. The very inferior quality of a large proportion of the Irish bacon also arises from the pigs being fed chiefly, if not entirely, on potatoes, the poverty of which in azotised matters is well

known, though exceedingly rich in starch: but starch, however valuable as an ingredient of the food of animals, is not sufficient of itself for the support of animal life: and hence the necessity of combining articles of food rich in starch, as potatoes or turnips, with others of a contrary character, such as those mentioned above. The superiority of Swedish turnips over potatoes, for fattening animals, is well known: and they owe this property in a great degree to the larger proportion of azotised matters, as compared with their starch, which they contain. Swedish turnips, with the addition merely of hay or straw, may be used for fattening cattle, though it is desirable that a greater variety of food should be given; but raw potatoes, with hay or straw only, cannot be employed for fattening. The very large consumption of potatoes necessary to afford the required supply of azotised matters would be productive of the most injurious action on the bowels of the animals. When boiled, they are considerably improved in this respect, but still very inferior as a sole article of food. From these considerations it will be seen that the Swedish turnip can be very advantageously substituted for potatoes in feeding pigs, a subject now of much anxiety. Combined with a very small proportion of bran, or pea and bean meal, or even oatmeal, steamed Swedish turnips form a very valuable food for either store or fattening pigs.

So much for the character of the food itself. The other considerations in the case of the fattening animal are cleanliness, quietude, and the maintenance of an equable temperature. Nothing can be more conducive to the health and comfort of the animals than cleanliness.—The want of this cannot fail to produce an impure atmosphere, eminently injurious to animal life. Due precautions must, therefore, be adopted to keep the stalls clean, and especially to see that no decaying vegetables be allowed to remain about the feeding troughs, which should be frequently washed out. But in our efforts to insure cleanliness, we must take care to disturb the animals as little as possible. With the object also of contributing to the comfort and quietude of the animals, their food should be supplied at stated hours, the observance of which should be attended to with the most rigid punctuality, as they soon learn when the feeding hour approaches, and becomes restless if not then supplied. The common practice is to feed at six o'clock in the morning, at noon, and again at six

o'clock in the evening: but we believe it is an advantage to feed four times a day, instead of three times. After being supplied with the turnips or other root, the person in attendance should have the manure removed from them, and then litter adjusted; and having eaten a little hay or straw they soon lie down, not to rise until next feeding hour comes round.

The maintenance of a uniform and rather high temperature is also conducive to fattening. Exposure to cold is now well known to cause an increased quantity of food to be consumed to supply the waste occasioned by the maintenance of the proper temperature of the body. To most of our readers it will be unnecessary to state that the heat of animals is mainly, if not entirely, owing to the combination of the oxygen of the atmosphere with the carbon supplied by the system, and the consequent formation of carbonic acid gas which is extricated from the lungs. The greater the amount of heat given off by the exposure to a low temperature, it follows that an increased demand will be made upon the carbon supplied by the food: and hence it is that to some extent a high temperature is to be regarded as equivalent for food. A high temperature is, however, usually associated in the minds of Farmers with filthy houses, where there is want of ventilation, and little attention paid to cleanliness: but it need not necessarily be so. Due arrangements may be made for ventilation without subjecting the animals to currents of cold air.

From the Farmers' Gazette.

ON PRUNING ORCHARDS.

Pruning orchards, if judiciously performed, adds greatly to the health, early bearing, and long life of the trees. The more the range of the branches shoot circularly—a little inclining upward—the more regularly and evenly will the sap be impelled to every part, and the better the tree will bear. I would never be inclined to shorten a branch, unless for the figure of the tree. When it is necessary that a bough should be taken off, let it be cut as close as possible to the boll or stem, as the wound will heal sooner. See *Cook on Pruning*.

Do not let the range of the branches be too near each other; for remember all the fruit and leaves should have their full share of the air and sun. Let the middle of the tree be as free as possible from wood, so that no branch shall ever cross another, but all the extreme ends point outward. When the branches excoriate,

or cut each other, the sap is vitiated and causes a curl in the leaves, and specky fruit. I would prefer a saw to a bill or hatchet in taking off the large branches; but the wound should be always smoothed after it with a knife, and the cut smeared afterwards with a medicated tar, a receipt for making which I will insert below.—Any raggedness or laceration in the cortex, or bark, should be pared down to the quick, and the medicated tar applied with a brush. Moss, &c., should be rubbed off, and any branch which, even in three years time, would injure the symmetry of the tree should be lopped off. It should be remembered that the beginning of November is the best time for pruning—some authors mention other times. It is also sometimes necessary to place dung round the roots, and cut some of them if too numerous. When trees are much thinned of wood they generally throw out an abundance of shoots in the spring following, which should be rubbed off, but not cut; for cutting tends to increase their number. I am certain that many persons, from prejudice, will be averse to heavy pruning; but experience shows us that a tree overloaded with wood never produced good fruit.—It may have more in number—but every costermonger knows that it is the fine fruit that sells the orchard, and that the inferior rubbish are scarce worth the cost of gathering them. Pruning fruit trees is as necessary as the hoeing of turnips, and it will yet become as general. Mr. Boulding, of Sittingbourne, highly approved of the above-named essay. He applied the directions recommended by Mr. Bucknall, both to his apple trees and cherry trees and had all of them free from specks, and of a superior quality. Every farmer should have an orchard near his house; not to speak of the fruit, the very blossoms purify and perfume the circumambient air, and, according to many medical men, for this reason, apple trees near a house are conducive to the health and longevity of the inmates. In Herefordshire, where there are very many orchards, the people live to a great age; this has been long remarked, and is owing to the above cause, and the plentiful use they make of cider. We are told in history, that when King James I. visited Herefordshire, ten men and women, whose united ages made one thousand years and upwards, danced a Morris-dance before that monarch.—*Vid. Butler's Chronol. and Biog.* The medicated tar I allude to is made thus: Take $\frac{3}{4}$ oz. of corrosive sublimate, reduced to fine powder with a wooden hammer, and dissolve it with a glass of gin, or spirits, in a three pint earthen pipkin, stir it well and fill the vessel gradually with vegetable or common tar; stirring all till they are well incorporated, and the mixture will do for about 200 trees. Note.—The corrosive sublimate is a deadly poison, and should not be left long without mixing it for fear of mischief to any creature or member of his family. Yours, &c., J. T. DUNNE.

ON SUBSOILING.

By Mr. ALEXANDER OGG, *Land Surveyor, Union street, Aberdeen.*

At a time when Agricultural improvement is creating so much interest—and when Agriculturists generally are aware, that, by energy and perseverance, combined with caution, experience, and capital, it is practicable in many cases to double the produce of the soil—and when large sums of money are about to be expended on such improvements—I trust I may be excused for troubling you with the following remarks regarding subsoiling.

The importance of this improvement, particularly in connexion with thorough-draining, is now generally admitted.—The difficulties, however, are so various that comparatively few have as yet been induced to give it a fair trial. The want of sufficient strength and the expense are the principal objections.

I have for several years subsoiled all my land previously to green cropping, a considerable part of which was thoroughly-drained; but part was haugh land, and did not require draining, and had few or no earth-fast stones in it. The subsoil, however, within 5 or 6 inches of the surface, was exceedingly hard and stiff; but the operation was less expensive, and required less strength, than if it had been of a tilly subsoil with large boulders or rocks. In every case where subsoiling has been applied, I have found it productive of very beneficial results.

This season, however, I had to subsoil a field having a very hard tilly clay subsoil with some earthfast stones; and finding that the work could not be accomplished without a greater strength of cattle than I had on the farm, or could conveniently procure, I resolved to make an experiment of subsoiling this field by manual labour—it having been previously thoroughly drained.

I employed a plough with a pair of heavy strong oxen, with six good labourers to follow the plough with common shoulder earth-picks, who, after the plough had opened a furrow from ten to twelve inches deep, were distributed at equal distances along the furrow; each having his part allotted to him, and standing on the firm bottom of the furrow, he commenced by making an opening to the requisite depth—say from 6 to 8 inches—in the subsoil and then, by striking the pick in a horizontal direction into the subsoil to the depth above mentioned. Each man proceeded in this way, working backwards, until his portion was completed. The stones which could be removed were thrown on the surface; and any large ones were taken out by the assistance of the other men, or their position marked for being afterwards blasted. The horizontal strokes of the pick were found much more efficient than the downward strokes and much easier to the labourer.

In similar operations, the number of workmen required will depend on the nature of the subsoil; but from 6 to 10 men

will generally be found sufficient to keep a plough going.

The expense in this case was about £22 per imperial acre for the manual labour, including the expense of boring and blasting a few of the stones. The labourers were paid at the rate of 12s per week for 8 hours a day. The man and oxen required, little or no more time than if a subsoil plough had been employed, doing nearly one third of an acre per day. In that case six horses would have been required, which, with one man to hold another to drive, and at least two men to remove the stones, the expense would have considerably exceeded that of the manual labour, notwithstanding the high rate of wages.

There is no doubt that subsoiling may be used with advantage in many cases where it is never thought of; and many of the difficulties might be got over, were Agriculturists generally aware of its beneficial effects. The expense of procuring proper subsoil ploughs and harness has in many cases prevented tenants from making a fair trial. The difficulty would perhaps be obviated, were proprietors to procure subsoil ploughs and harness suited to the subsoils on their respective estates, and let them out to their tenants at a reasonable rate. We might then hope to see the operation of subsoiling become general.

Or were a few spirited contractors to furnish themselves with these implements, and a sufficient strength of cattle, to execute the work by contract, they would, by becoming acquainted with such work, execute it more efficiently, and at a cheaper rate, than it could be done by tenants individually; and I have no doubt that such contractors would be well employed.

This subject seems worthy the consideration of our local associations, and I trust, they will bestow upon it that attention which it deserves.—If these few hurried remarks be of use in directing the attention of Agriculturists to this important subject, my object will be fully gained.

THE POTATO DISEASE.

IMPORTANT COMMUNICATION.—The following fact about the potato plant may not be unimportant at this time of the year. I last year received, direct from the Brazils, two barrels of genuine wild potatoes, small, but very healthy, having been grown in a district where no potato blight has been known. They were planted, about the end of February, in land that had remained in pasture more than twenty years. The situation and soil were favourable,—the latter a little stiffish. No dung was used in setting them, but a few decayed leaves and a little sand. Under these circumstances, then, it might be well expected that if potatoes can escape disease, these would have a fair chance—wild Brazilian potatoes, planted in England for the first time, in a favourable situation, and in virgin soil. Yet in the autumn the disease failed

not to appear, and even carried off a third of the finest and most vigorous looking crop ever seen. The above must, then, contradict many of the theories which have been advanced as to the cause and origin of the disease. It cannot be owing to any *degeneration* in the plant itself or to any corruption or exhaustion of the land, or from over dunging, as some imagine. If you think this letter worthy of insertion, as throwing any light (if it be only of a negative character) upon the question of the potato disease, either by settling disputed theories, or by preventing Farmers from taking useless precautions and making vain experiments, it is at your service for insertion.—*Cor. of Mark Lane Express.*

From the Scottish Farmer.

ON REAPING CULMIFEROUS CROPS BEFORE THE PLANTS REACH MATURITY.

The value of a crop is expressed by the quantity and quality of produce; and when considering the stage at which grain ought to be reaped, my observations are intended to bear on these essentials, and if possible, to connect them together.

When a culmiferous plant reaches maturity, the straw becomes stiff, sapless, and the ear curved towards the earth; the grain is hard and loose in the chaff. When such effects are manifest, crops are said to be ripe, and frequently not reaped until arrived at this stage of maturation. Some individuals, however, reap crops before the plants reach maturity, and the system is called green-cutting. But green-cutting must be used in a comparative and restricted sense.—It is green only when compared with dead ripeness; and there is a stage of maturity previous to which it must be injurious to reap corn.

Corn is green cut when the straw is full of sap, green in colour—except the part immediately below the ear, which is commonly yellow—the grain soft, though not milky, and the whole plant perfectly pliant. Sometimes, however, the straw immediately below the ear does not become yellow, as in adverse seasons, when it partakes of the dingy green then common to the plant; and in such cases, the stage of maturity for cutting green is indicated by the general appearance of the plant—a thorough knowledge of which can only be acquired in the school of practice.

That culmiferous crops die downwards, might be demonstrated physiologically, and observation leads to the same conclusion. The extreme part of the plant, the ear, first assumes the hue that indicates decay: then that portion of the stalk immediately below the ear, and the change gradually proceeds downwards. The curved ears, which characterise matured crops, are evidence of the plant dying downwards: because, if the lower part of the stalk ripened first, it would be unable to support the heavy, unripened ear. It therefore appears that the grains

of culmiferous crops cease to have intercourse with the rest of the plant before the curvature of ear takes place; and all that is obtained after this symptom is the ripening of straw. The economy of nature is strikingly displayed in the dying of the plant and curvature of the ear.—By the plant dying downwards, the under part of the stalk retains strength to support the curved ear, in which position the grains often drop out and replenish the earth; whereas, were the lower extremes first to die, the heavy ear would fall prostrate, and the grains germinate in the chaff without being in contact with the ground.

Since corn dies downwards, it is evident that when the circulation of juices ceases in that part of the stalk immediately below the ear, the grains derive no further benefit from the rest of the plant, or from the earth; and to delay reaping a crop when at this stage of maturity, is unnecessarily exposing it to the weather. But crops may with propriety be reaped seven or eight days before reaching this state, because the juices which are assimilated in the grains during the interval proceed from receptacles in the plant, and not from the ground; and the circulation of these juices is continued, although the crop is severed from the earth. The fact of juices continuing to circulate after plants are separated from the earth, could be supported by many illustrations from the vegetable kingdom; but an experiment that lately came under my notice will serve for the present, and tend to point out the advantages of green reaping generally.

Last season the occupant of the farm of Muirton cut two ridges of wheat, and left uncut alternately over a portion of a field; and at the expiry of fourteen days the other ridges were cut, the weather, in the interval, having been damp and cloudy. The wheat stood in the field until dry; both kinds being thrashed and carried to market on the same day. The ripe cut portion of wheat yielded 28 lbs. more on the whole extent than the green cut one; but the grain of the latter was much clearer and brighter in colour than the former, and sold at 5s. per quarter higher, although both were equally dry. I had an opportunity of seeing the first cut portion on the day it was reaped, and testify the straw to have been full of sap, and perfectly green in colour, with the exception of a small portion below the ear being yellow.

HIGHLAND SHEEP-DOGS.

The shepherds' dogs in the mountainous districts often shew the most wonderful instinct in assisting their masters, who, without their aid, would have but little command over a large flock of wild black-faced sheep. It is a most interesting sight to see a clever dog turn a large flock of these sheep in whatever direction his master wishes, taking advantage of the ground, and making a wide sweep to get round the sheep with-

out frightening them, till he gets beyond them, and then rushing barking from flank to flank of the flock, and bringing them all up in close array to the desired spot. When, too, the shepherd wishes to catch some particular sheep out of the flock, I have seen him point it out to the dog, who would instantly distinguish it from the rest, and follow it up from the rest till he caught it. Often I have seen the sheep rush into the middle of the flock: but the dog, though he necessarily must have lost sight of it amongst the rest, would immediately single it out again, and never leave the pursuit till he had the sheep prostrate, but unhurt, under his feet. I have been with a shepherd when he has consigned a certain part of his flock to the dog to be driven home, the man accompanying me farther on the hill. On our return, we invariably found that he had either given up his charge to the shepherd's wife, or some other respectable person, or had driven them, unassisted, into the field, laying down himself at the narrow entrance to keep them from getting out till his master came home. At other times, I have seen a dog keeping watch on the hill, on a flock of sheep, allowing them to feed all day, but always keeping sight of them and bringing them home at a proper hour in the evening. In fact, it is difficult to say what a shepherd's dog would not do to assist his master, who would be quite helpless without him in a Highland district. Generally speaking, these Highland sheep-dogs do not shew much aptness in learning to do anything not connected in some way or other with sheep or cattle. They seem to have been brought into the world for this express purpose, and for no other. They watch their master's small crops of oats or potatoes with great fidelity and keeness, keeping off all intruders in the shape of sheep, cattle, or horses. A shepherd once, to prove the quickness of his dog, who was lying before the fire in the house where we were talking, said to me, in the middle of a sentence concerning something else, "I'm thinking, sir, the cow is in the potatoes." Though he purposely laid no stress on these words, and said them in a quiet unconcerned tone, the dog, who appeared to be asleep, immediately jumped up, and, leaping through the open window, scrambled up the turf roof of the house, from which he could see the potato field. He then, not seeing the cow there, ran and looked into the byre where she was, and, finding that all was right, came back to the house. After a short time the shepherd said the same words again, and the dog repeated his look-out; but on the false alarm being a third time given, the dog got up, and, wagging his tail, looked his master in the face with so comical an expression of interrogation, that we could not help laughing aloud at him; on which, with a slight growl, he laid himself down in his warm corner, with an offended air, and as if determined not to be made a fool of

again. Occasionally, a ponching shepherd teaches his dog to be of great service in assisting him to kill game. I remember one of these men, who was in the habit of wiring hares; and, though the keepers knew of his mal-practices, they were for some time unable to catch him in the act, in consequence of his placing his three dogs as videttes, in different directions, to warn him of the approach of any person. A herd-boy at the farm near my house puts his dog to a curious use. A great part of his flock are sent to pasture on the carso ground across the river, and, when the boy does not want to go across to count them and see that they are all right, deterred from doing so by the water being flooded, or from any other reason, he sends his dog to swim across and collect the sheep on the opposite bank, where he can see them all distinctly. Though there are other sheep on the carso belonging to different people, the dog only brings his own flock. After they are counted and pronounced to be all right by the boy, the dog swims back again to his master.—*St. John's Wild Sports of the Highlands.*

From the Dublin Farmers' Gazette, April 24.

SALT AS A MANURE.

It has been often asked why it is that lands adjoining the sea coasts possess the following advantages over those placed more inland. First, why that vegetation in spring, and maturation of crops in autumn, are more early. Secondly, why it is that in the majority of cases, corn and other cereal crops, grown near the sea-coasts, are less subject to blights, and other vicissitudes of season, than those grown more inland; and why it is that in the most favourable seasons, where blights are not observable in any situation, that corn grown near the coast is better in quality than that obtained inland. And finally, why it is that cattle and sheep are less subject to disease when fed on salt marshes, and as a consequence thrive more rapidly, on a comparatively scanty herbage in such situations, than they do in pastures of greater luxuriance, as far as appearance goes, and certainly of a more abundant supply so far as bulk is the criterion to judge by.

To these questions the solutions generally given are first as regards early vegetation, in such cases that it is superinduced by the mildness of temperature as already shown in our pages by the gentleman "M. M.," who supplied some excellent papers on the Philosophy of Agriculture. This being coded, it is natural to conclude that the health of animals is in some measure preserved by the same cause, and hence it is that early lambs are found more abundantly in such situations, although comparatively exposed, than will be found more inland in situations comparatively sheltered; and hence it is also that sheep shorn on the approach of winter, near the coasts in Connemara and Trawagh, will suffer much less in those exposed places than if stripped in a simi-

lar manner in the sheltered situations in the centre of the island. Was he right in supposing that the same cause operates to produce early maturation of crops, and precocity of animals; or is there any other cause to which such can be attributed either solely or in part, to produce these early changes? Some practical men will tell us that early vegetation and early maturity of crops, are the effects of causes of a mechanical character, produced by the porosity of the soils in such situations. This cannot be, as we have inland soils equally porous, where such effects are seldom if ever visible, whilst we have these effects produced to the fullest extent on some of the stiffest soils in the kingdom adjoining the sea coasts; whereas, on soils of similar stiffness, tenacity or adhesiveness, where inland, results of nearly an opposite character will be found visible to the most casual observer. It is also said by practical men, that the early maturation and superior quality of crops in such situations as those on our coasts, are owing to the amount of calcareous manures used on the land. This cannot be, as we have on many of our inland soils, where we experience no such results, a much greater amount of calcareous matter than is to be found in many of those favoured situations already alluded to.

To what, then, can we justly attribute those favourable results discernible on our coast lands? Is it to any one cause, or are they owing to a combination of causes, in which salt exercises a peculiar agency? Agricultural chemistry has done much for us in this respect, but we confess we are of opinion that much more yet remains to be done before we can reconcile the conflicting opinions of practical men, on the application of science, without being subject to practical objections.

Amongst the various questions put to us by our numerous correspondents, the use and application of salt as a manure have been repeatedly brought under our notice; nor are such notices confined to correspondents who put questions by letter, for week after week they are put to us verbally by gentlemen who do us the honour of waiting on us. Last week we had not less than half a dozen on the day our paper was going to press, being then too much hurried to pay them the attention called for, we now bring out the subject in a general way, that each in his own particular case may be able to judge more correctly of our views; and as the question being one open to objection, that our numerous and valued contributors may have an opportunity of putting forward their views for the benefit of all whom it may concern.

We have used salt on almost every variety of soil, for almost every species of farm and garden crop, and at all seasons of the year: the lands we have found it best adapted for were dry soils and drained bogs lying inland, and in such cases we have found it more or less beneficial to

every species of crop. We have, in many cases, found good results from its application at all seasons of the year, and we have, in some few cases, found little good to result from its application at any season of the year. We have used it in quantities from 5 to 3 cwt. per plantation acre; we have found 5 cwt. mixed with 10 bushels of soot per acre to produce good turnips, mangels, potatoes, carrots, and parsnips, and we have found half that quantity of each to produce good effects as a top-dressing for wheat, applied to the land in April, and for the green crops immediately before sowing them. We have found that 20 cwt. of salt applied to poor, stubble land in October, produced 10 tons of potatoes, whilst 20 tons of the best farm-yard manure produced but 12½ tons; and the same description of land without any manure produced but 6 tons. The following autumn we applied 1 ton of salt to the unmanured land, dug into the ground as the potatoes were dug out, and in three weeks wheat was sown on the entire field: the result was, the parts manured with the salt were less subject to the attacks of slugs or grubs than that manured with the farm-yard dung; the produce in grain and straw was less on the salted ground than on the land manured with dung, which latter was 10 days later in ripening, and sold at 2s. 6d. per brl. of 20 st. less in price. The entire field was sown with clover and trefoil for sheep-feeding, and although there appeared scarcely any difference in the crop, when the sheep were turned in to feed, they continued to feed on the salted land much more constantly than on the dunged land during the summer months, and when the land became bare in autumn, they ate the hearts out of the plants on the salted land before they had completely eaten down those on that dunged. The entire field was limed at the rate of 80 barrels to the acre, and ploughed for wheat, sown in with the harrow, furrows shovelled; the result proved to be that the dunged land produced a crop considerably mildewed, whilst that on the salted land, although less in quantity, was comparatively free from the disease.

On deep bog, drained and limed for mangels, turnips, rape, and rye, we found the results nearly similar, but in this case we used 30 cwt. of refuse salt, mixed with the light ashes, whilst twice the amount of ashes used without salt, produced much lighter crops at first, and were less lasting in their effects on the succeeding crops of oats, flax, and clover. We have, for turnips, ploughed in on stubble land, in autumn, 80 cwt. of salt, and in spring, a fortnight before sowing, harrowed in on another part of the same land 30 cwt. of salt, and on another part applied 30 tons of the best farm-yard dung, and we found very little difference in the produce at the time of taking up the crop, notwithstanding that those produced on the salted land suffered less from the mildew during the

drought of summer, but they kept better during the succeeding winter and spring months than those did that grew on the dung. The entire land was sown with wheat in February following; all grew well, had an excellent appearance to the time of blossoming, when rain and storms set in, and the entire crop was so much damaged that no just comparison could be made with the grain produced on the dunged and salted lands. At this time bones were first spoken of, and little used in Ireland, and guano had not been heard of. We have used salt as a manure on poor stubble land for flax, and found that in dry seasons its effects on the crop were very considerable, whilst in wet seasons, on similar land, the effect was scarcely appreciable; the same we can say of its use as a manure for peas, beans, and vetches, but in every case that we used it we found salutary effects on the succeeding clover and grass crops. We have used it in composts with turf-mould, and turf-mould and lime, and in sawdust, and sawdust and lime, and found the advantages, generally speaking, decided in every case. We have used it on grass land to enrich it, and destroy moss, in some cases with the best possible effect, and in others without effect at all, until the land was subsequently broken up, when its effects on the succeeding crops were visible for many years.

We hope these general remarks will, in some measure, answer the purposes of our numerous querists on the subject of salt as a manure—as a condiment for cattle, we will speak more hereafter; in the meantime we will be happy to hear the opinions of some of our practical and scientific friends on this subject, not yet sufficiently understood by most people, nor understood at all by many.

From the Farmers' Journal.

THE CORN TRADE—FURTHER RISE IN PRICES.

The greatest rise which has taken place in the prices of nearly every description of grain, as well as in those of flour, within the last ten days, has, we find, been productive of much uneasiness in the minds of the consumers as to what period we may look to any decided change in value. For our parts, we have all along conceived that, including the imports from America during the present year, the available supplies of home-grown wheat have been about adequate to meet the wants of the population until next harvest, even making due allowance for the partial failure of the potato crop.—But we have now to deal with another portion of the subject which demands our special attention, and which appears likely to increase our difficulties to a very considerable extent—we mean the great falling off in the receipts of grain from, and the large shipments which are being almost daily made from this country to, Ireland. Although such a demand might have been anticipated, its extent warrants us in the supposition that prices will rule

very high here during the next 3 months. In order to render the foregoing observations clear to the comprehension of our readers, we here give the following statement of the imports of grain, &c., from Ireland into Liverpool, from the 1st of July to the 30th of November, 1845, compared with the same period this year:

Wheat.	Barley.	Oats.	Oatmeal.	Flour.
Qrs.	Qrs.	Qrs.	Loads.	Sacks.
165,721	6,099	28,823	79,320	159,185

And for the same period in this year—

Wheat.	Barley.	Oats.	Oatmeal.	Flour.
Qrs.	Qrs.	Qrs.	Loads.	Sacks.
22,790	3,227	75,573	26,286	42,123

Showing a deficiency in the quantity imported from Ireland of—

Wheat.	Barley.	Oats.	Oatmeal.	Flour.
Qrs.	Qrs.	Qrs.	Loads.	Sacks.
142,931	2,372	23,250	53,040	117,062

To the above, we must add the excess of exports from Liverpool to Ireland this year compared with last—

Wheat.	Barley.	Oats.	Oatmeal.	Flour.
Qrs.	Qrs.	Qrs.	Loads.	Sacks.
23,623	1,012	—	278	5,455

Showing a difference retained by and supplied to Ireland as far as Liverpool is concerned, in the present year of—

Wheat.	Barley.	Oats.	Oatmeal.	Flour.
Qrs.	Qrs.	Qrs.	Loads.	Sacks.
166,554	3,921	23,250	53,318	122,517

In addition to the above quantities, 22,333 barrels of American flour, 57,578 qrs. of Indian corn, 11,657 barrels and 7,029 sacks of Indian corn meal, have been shipped in five months to Ireland from this country. During the quarter ending Dec. 27, 1845, the arrivals of oats from Ireland into London, were 221,817 quarters; but during the twelve weeks in the same time this year, they have only been 62,000 quarters.—Although Ireland, as we have thus shown, has retained a large portion of her usual shipments, and received immenso supplies from England, exclusive of the direct shipments made from America, prices are still advancing on both sides of the channel, the low qualities of foreign wheat having risen in London during the past fortnight fully eight shillings per quarter. It would be impossible for us to foretell the result of all this; yet we confess that we see every prospect of increasing difficulties.

RAISING ROOTS.—William Garbutt, of Wheatland, whose great and uniform success amply shows his skill, says, in the Genesee Farmer, "The principal art of raising roots is to make the ground rich and well pulverized; and fall is much the best time to do it. Apply 40 or 50 wagon loads of well-rooted manure; 5 bushels of plaster; and 5 to 10 bushels of ashes per acre; spread them evenly over the surface, and plough 7 or 8 inches deep, and narrow furrow it not over 10 inches wide. In the spring, harrow or cultivate thoroughly, until the ground is well pulverized and the manure well mixed through it. Be sure to plant early, before the ground gets too dry to germinate the seed."

From the Albany Cultivator.

REMEDY FOR WEEVIL.

EDS. CULTIVATOR—I see by the last number of the Cultivator, that Mr. Clark Rich, of Shoreham, Vt., has been trying many experiments without success, to remove or destroy the black weevil, which is so destructive to grain, and so troublesome in mills, granaries, and barns.

They are likewise very destructive to rice. I will furnish the public through the medium of your estimable publication, a remedy which has thus far stood the test of experience; hoping that you may deem it worthy of insertion. I have never failed after repeated experiments, for many years; and have been frequently amused, particularly in witnessing its effects in a cask of rice, when it was almost destroyed by weevil.

It is wonderful to see with what expedition they will leave it when the remedy is applied.

The great advantage of this remedy over others, is that it does not in the least degree injure the grain, and also, it is so simple and easy, that almost every person has it in his possession.

It is simply sassafras (*Lanous*) root, placed among the grain, and in places infested with them. I have never had the opportunity of putting it in a stack of grain at time of stacking, but have no doubt if it be well mixed with the grain, it would keep out many other kinds of insects that are so injurious.

It is a well known fact that no kind of insect likes the smell of sassafras.

The same root is useful about poultry in the habit of roosting on poles made of the tree, are not liable to get lousy.

Yours respectfully,

JOHN H. KING.

Georgetown, D. C., Dec. 23, 1846.

PARSNIPS.

The mode of cultivating parsnips so much resembles that of other drill crops, that to enter into it fully, would, I think be unnecessary; but it may not be amiss to say, that the drills should be eighteen inches wide and the plants thinned out, leaving spaces of six inches between each plant in the drill; and that the plants need not be earthed up like potatoes, nor the earth taken from them as in the cultivation of turnips. One and a half pound of seed may perhaps produce sufficient plants for an English acre, but it is best not to calculate in this respect too closely, and it is better to sow a little more, in order to secure having enough and to spare; and the seed should be sown in March.—I am told that the plants will bear transplanting like the Swedish turnip, but may be put further into the ground, as the Swede should be left two or three inches out of the ground, like turnip which have just been thinned. To expedite the growth of all roots transplanted, they should be transplanted into fresh dug ground, and watered with liquid manure from the tank, or dissolve guano. The

parsnip, beside being good food for man, is also an excellent food for stock; and both turnips and cabbage, when mixed with well boiled rice, afford so substantial and palatable a dish, and are so much required for cattle, that they cannot almost be grown in too large quantities.—*Correspondence of the Farmer's Gazette.*

From the *Farmer's Gazette.*

WHITE BELGIAN CARROT.

Stirling, November 2, 1846.

Sir—The carrot having very properly been recommended in the *GAZETTE*, as one of the best substitutes for the potato, it might further be of use to notice the claims of the White Belgian, as one of the best (if not the *very best*) varieties of the species for that purpose. The plant is of vigorous habit, yielding heavy crops; the roots of large size, more palatable, and less watery than any other variety; thick in proportion to their length, and, on that account, better adapted to thin, shallow soils. This variety requires no other mode of culture than the others; the main points, however, may be stated thus:—The soil should be in good condition; if virgin, so much the better; free and deep, if possible: those approaching to a mixture of bog and sand are the best. Plough or dig ten or twelve inches deep in October or November, turning in about as much manure as would be given for potatoes. This previous preparation is most essential to good success, particularly if the manure be not old, and in a decomposed state. In spring, cross-plough and harrow, or in spade culture, point over the surface. Let shallow drills, 15 or 18 inches apart, be then drawn, either with a hoe, pointed stick, or turnip sowing machine; in these sow the seed and cover slightly, or the drills may be made of such width as to admit of the horse-hoe. The best time for sowing is from the beginning of March till the end of April.—From 8 to 10 lbs. of seed are required for an Irish acre. The plants should be singled by the hand, so as to be left at 4 or 5 inches apart, and the ground kept perfectly clean by frequent hoeings and weedings. The roots may be taken up with a three-pronged fork in December, the tops cut off—care being taken not to injure or bruise the roots by rough handling or tossing—and stored in a dry state, being laid or built in regular heaps, and covered with straw, but they are sometimes left in the ground during winter, and taken up as wanted. Twenty-five to thirty tons per Irish acre may be considered a good average crop, although we have heard of thirty-five and even forty.

Seaweed makes an excellent manure for carrots; and good crops have been raised on the poor sands of the seacoast, by trenching over the soil in autumn, and laying the weed plentifully in the trenches.

The most simple mode of cooking the carrot is, after washing and scraping, to divide the root lengthwise and boil sufficiently in salt and water. If eaten hot,

with a little salt, it will be found both palatable and nutritious. As food for horses, it is, perhaps, the best and most nutritious of all the succulent roots; and for milk cows it is infinitely superior to turnip or mangel, imparting a rich, agreeable flavour to a plentiful supply of milk.—*Yours, &c.* D.

EFFECTS OF LIQUID MANURE.—In Mr. Dickinson's evidence before the Select Committee on Metropolitan Sewage Manure, he states that, in one year, no less than nine or ten crops of valuable grass have been grown. The liquid manure from the stable is conveyed to a tank, from which it is pumped into a water-cart, conveyed and mixed with two parts of water, if the temperature be warm; but if lower, mix it with one part of water; and in the winter season put it on neat, to raise the temperature of the earth. The land was not worth 12s. per acre, and the result was as stated above. The crops varied from 10 inches to 3 feet 6 inches high, and the weight per acre has increased from 4 tons in the January crop, to 12 tons when cut in June.—When Mr. Dickinson took samples to the Beverly show, he was told he had exhausted the soil. In reply, he produced plants of the tares and oats, of which the number of grains was astounding. He estimates 1100 gallons of urine, and 2200 of water as sufficient for an acre. In confirmation of Mr. Dickenson's statement we may mention that with 640 gallons from the cow-house, mixed with 40 lb. of sulphuric acid, costing 4s. 2d., the Rev. L. V. Harcourt produced an increase of hay to the value of £1 6s. 3d. per acre.—*Country paper.*

ACIDS.—In order to act on bones for agricultural purposes they should be first powdered, and from half to an equal weight of oil of vitriol, diluted with three or four parts of water, poured upon and well stirred with the powder. Considerable effervescence takes place, and a white pasty mass is formed after standing for 24 hours, which may be afterwards mixed with water as required.—The sulphuric acid in this reaction takes the excess of lime from the sub-phosphate of lime (bone earth), and forms sulphate of lime (gypsum) and a soluble biphosphate of lime, which is afterwards dissolved. It would be preferable to calcine the bones before acting on them in this manner. We think that a better process would be to dissolve fresh bones, previously ground, in diluted muriatic acid, as the bone earth is perfectly soluble in this acid, and the gelatine of the bone would remain in a state of mixture. The whole to be diluted and used as a liquid manure.—Bones cannot be advantageously employed for agricultural purposes unless reduced to powder.—*Pharmaceutical Times.*

DRAINING.—Imperfect underdraining is very common, a writer in the *Hillsborough Gazette*, gives the following good rule:—If water stands on the surface of

a field three hours after rain has ceased to fall, that field is not sufficiently drained for the cultivation of grains.

Newcastle  Farmer.

COBBOURGH, JUNE 1, 1847.

It has frequently occurred to us that a great amount of our most valuable land is rendered comparatively valueless, for want of attention being paid to the construction of drains to carry off the superfluous moisture with which much of the very best portion of our fields abound,—rendering them totally unfit for the production of grain crops, and only yielding a coarse, unsatisfactory description of fodder, when they might be made available for the growth both of grain and roots, and grasses of very superior quality, and in an increased quantity, to repay the outlay in a single crop.

The farmers of England and Scotland owe their prosperity principally to the attention they of late years have paid to this all-important department of agricultural operations. Draining with them is the primary movement, and thousands of acres which heretofore produced only sedge and coarse grasses,—in fact little better than so much bog, to which the snipe and wild duck repaired for sustenance,—have by draining been made dry enough for wheat and barley, and rich enough for turnips.

Subsoiling, so invariably introduced, would be but a profitless operation if not preceded by under-draining, as it would merely enable the roots of the plants to penetrate deeper into the chilly subsoil, the cold of which is increased in the ratio of its distance from the surface.

In this country the facilities for draining are very extensive, and there are few farms which present any impediments to laying all the land dry; and we will venture to say that the time, the labour, and the expense, will be fully covered in a couple of seasons at most, and by care and attention to the operation the beneficial results will be seen for an age.

Much has been written,—numerous have been the discussions, and great has been the controversy in Europe, in England in particular, respecting the mode of procedure; but all have agreed as to the vast importance of the subject.

A great difference of opinion has existed as to the depth required, and the

necessary distance apart; but it must be evident to every practical man that local circumstances, and the nature of the subsoil, must produce varied action for attaining the desired end. We believe the question is, how to efficiently perform the operation at the least expense,—for it is certain that any soil that it is necessary to drain at all, can scarcely be made too dry. A writer in the *Albany Cultivator* lays it down as a rule that where water remains on the surface for three hours after the cessation of rain, such land requires draining. Some 7 years since we cut some drains on land which had been erroneously supposed not to require such an operation, and certainly we found no water at the time, nor for many weeks; but they have run freely ever since on any occasion of undue moisture.

We then made use of cedar poles of about four inches diameter to form the sides of the channel, or water way, and covered with a slab or boards; but, although we have not had any failure at present from the decay of the materials, we shall certainly adopt a different method in future, and for this reason: the bottom of this drain can scarcely be too narrow, as the soil with which the drain is filled by the downward pressure will, by being forced into a contracted space over the water-way, become so consolidated as to form and retain a channel, even should the materials used in its original construction decay.

In England, much of the draining is formed by tiles with only a channel of an inch diameter; but it must be obvious that the work thus executed must be performed in the very best manner, and will require great nicety in its execution to prevent so small an orifice from getting choked by the finer particles of earth which may find their way, after the utmost care, under the tile. It is certain we shall find some difficulty in getting labourers who will pay the requisite attention to their construction; the narrower they can be made in all parts the better,—and supposing a drain of two feet six inches deep (and none should be less,) only sufficient surface soil should be removed to enable the labourer efficiently to execute his work to the required depth. A breadth of sixteen inches at the top, tapering gradually and regularly on both sides to six inches at the bottom, (which bottom should have a plane even surface, without any hollows or swells throughout its entire length,) would, at a

distance of one rod apart, effectually accomplish all that is required; while in some instances the distance might be increased to twenty-four feet, according to the nature of the soil and the amount of surplus moisture. We intend making use of one inch and a quarter cedar boards in twelve feet lengths, the one 6 inches, the other five inches wide,—these nailed or pegged, the flat of the six inch one on the edge of the other, forming an inverted V, thus Δ , on the sides of which and overlapping the top, the soil taken from the surface to be laid, filling in with the most tenacious of the soil first, and the remainder with the original surface soil. We would avoid the use of all straw material as much as possible, and peat-straw especially, as, however it may furnish a great bulk to fill the excavation, when it rots, as it will do in a short time, the whole upper surface sinks rapidly and forms a complete channel to convey the surface water, and with it some of the finer soil to choke the drain below.

Doubtless where stones are abundant, and where little labour is requisite in breaking them, a more durable drain may be formed of them; but we much question whether, (unless extreme caution is used in their construction,) they would, under ordinary circumstances, be so long beneficial as the other method; for, let the surface water once begin to percolate, and the whole of the labour is thrown away; and the lifting and relaying would entail an enormous amount of labour and expense. But we would say, whatever the method adopted, drain your land where necessary, and you will never regret the trouble.

The young Spring crops which had begun to suffer materially in many places from the late drought, are plainly indicating the benefit derived from the genial and gentle showers with which they have been visited; and the Fall wheat, where not too far gone, has derived considerable benefit, especially when the roller has been applied. There are some persons who are fearful of using the latter implement, from having an erroneous impression that great injury must be done to the crops, from the feet of the horses and the weight of the roller crushing the tender stem of the plant. They need be under no apprehension on that score,—for lands and crops which need rolling, will suffer far more by the neglect than by the application of that very useful operation.

To the Editor of the Newcastle Farmer.

DEAR SIR,—With reference to the observations of "An Ex-Farmer" on my communication, published in the *Cobourg Star* in April last, relative to the plan suggested for summer fallowing,—he is pleased to observe that he must differ from the method I proposed, except under favourable circumstances. In reply I must say that the farmers in this township never presume to summer-fallow for winter wheat under any other circumstances. My plan would, if adopted, afford an opportunity to prepare the inverted sward for the reception of the seed, instead of using two ploughs, as recommended by the "Ex-Farmer" on the 1st of September, thus turning up the subsoil to the depth of 10 inches the moment the seed was about being sown, if he intended it to be done in the usual season. The above plan would never answer, in my opinion, for stiff clay soil; the grain would scarcely germinate, much less vegetate in a healthy manner to stand a severe Canadian winter. I cannot agree to the plan proposed of sowing 4 bushels of oats to the acre as a preparation for winter wheat, being contrary to the usual routine of farming in my native country Ireland, and by no means following a judicious rotation of crops. Oats are very exhausting, containing the organic matter, which is an essential constituent drawn from the land it occupies, the place intended for the subsequent crop of wheat. I consider that one white crop should never precede another, (barley excepted.) Martin Doyle, in his address to the Young Farmers of Ireland, says that "it is an established principle among all good farmers, looking to the good condition of the soil, not to take two crops of corn (grain) in succession, but to cultivate some leguminous or green crop between the grain crops."

Pease are known from the broadness of their leaves to draw most of their support from the air, and consequently do not much exhaust the soil,—the cultivation of which would secure the object of clean tilth and friableness equally as well as is done by the naked fallow, and give the crop as much clear gain over that made. In many parts of the country the soil may be much improved in its wheat raising qualities by throwing up and mixing with the surface a small portion of the subsoil. In some instances this has been attended with strikingly successful effects,—in others where the subsoil has been thrown on the surface, the increase in the growth of wheat has been almost incredible, as witnessed by myself in the field of alluvial land referred to in my last communication in the *Newcastle Farmer*, where the subsoil taken from an open drain running through the lot had been scattered on the surface of the black mould on each side of the drain. Few persons in this country are willing to undertake the purchase and use of the subsoil plough; but all may adopt the practice of deep ploughing by the ordinary method, late in the

Fall, with very good effect. Doubtless large portions of our country might be thus greatly and perhaps permanently improved by the use of such manure, thus laying in immenso quantities just beneath the surface; but there may be other soils, not only useless but actually detrimental,—hence the necessity of discrimination and care. I shall always be very happy, when convenient, to offer any suggestions which may appear beneficial to the practical Farmer; but at this busy season of the year I must decline any "discussions" with an "Ex-Farmer," as I consider my time will be far more profitably occupied between the *plough handles*, than entering into any petulant and unnecessary controversy through the medium of an Agricultural publication. At the same time I do not "eschew scientific investigations," by any means. There are a thousand reasons why the laws of nature should be carefully studied, and as carefully obeyed by our whole rural population.

It is important that the Farmer should acquaint himself as thoroughly as possible with the natural laws which constitute the basis of the art by which he obtains his livelihood; and the more his practice is made to conform to these unerring laws, the greater will be his success; the readiest, and indeed almost the only medium of acquiring this information, is agricultural papers; they present to every farmer a medium for conversing with the most intelligent and successful of those engaged in the same occupation, in all parts of the country. The views of all may be obtained, compared, examined, and modified to suit the particular circumstances of each individual,—an opportunity which is almost equivalent to making a personal visit to each correspondent.

Yours &c.,

A CAVAN FARMER.

We are obliged to our Correspondent for his sensible and acceptable communication, but we find he is under a mistake in supposing that we were advocating the most pernicious system of taking two grain crops in succession,—a practice which has already been most detrimental to the Farmer's true interests.—Our proposition was to cut the oats in their green state, long before arriving at maturity, and consequently not taking any thing from the soil to the injury of a succeeding crop, while by thickly shading the ground weeds would be subdued, and the stubble left after the scythe being in a succulent state, would form a regular and beneficial manure, thus, instead of exhausting, renovating the soil.

We hope our correspondent will find time, in the intervals of his occupation between the "plough handles," to continue to favour us with the results of his agricultural experience.—ED. N. F.

To the Editor of the Newcastle Farmer.

Sir,—I have accidentally had an opportunity of perusing lately Nos. 7 and 10 of your *Newcastle Farmer*; and I assure you the perusal of them has yielded me much pleasure, and not a little information, on that most interesting and all-important subject, Husbandry.

It is a branch of industry, which, at one period of my life, and before coming to this continent, I prosecuted, both practically and theoretically, with animated sedulity. I am, therefore, naturally disposed to view with much approbation and complacency, your zealous and intelligent labours in the good cause; and in order to do what is in my power to convince you that I wish you every encouragement and success in your beneficent undertaking, I submit to you a few facts and hints, suggested by reading the above numbers of your *Newcastle Farmer*,—some of the fruits of a ten years' experience as a Scotch farmer.

In No. 10, p. 78, I observe a foot-note, stating the writers' (I presume your own) plan of protecting turnip-seed from the ravages of the fly. It reminds me of "old times," and is so near akin to my own method that I beg to lay it before you, and, if you please, also before your readers, somewhat in detail. Here it is.

I always (except, of course, when I wished to try any newly imported variety,) raised my own turnip seed; and taking for my motto, "Tis more prudent, and much easier, to keep well what is well than to make well," I caused it to be separated from the parent stalks, as soon as it would possibly thrash out. Attention to this I considered a matter of the highest importance, because it removed it out of the reach of its multifarious enemies, before they had power to do it any injury. I then had it dried—sun-dried, or otherwise,—as quickly as possible, cleaned it perfectly, and turned into it a quantity of best flour of sulphur; after which I immediately filled it into bags of a convenient size, which were hung up in the driest part of the kitchen.

Now, Mr. Editor, I can safely aver, that from the day on which I adopted this practice, my turnip crops, however arid and unpropitious the season might have been, never sustained any perceptible injury from the fly. And I will venture to add that turnip, or any other similar seed, treated and stored as I have described, will continue perfectly wholesome for any length of years.

The value of my practice was repeatedly and remarkably demonstrated by this,—that whilst almost every parcel of seed which I bought, generated the fly, my own home-raised, whether sown in my own or my neighbours' field, remained perfectly unaffected by it. You will now perceive that my whole process was based upon your hypothesis, (which I am persuaded is really the fact,) that "the extremely minute larvae of the insect are deposited with the seed."

A word on another subject.—Assume

that an intelligent system of rotatory cropping is pursued, and it is a standing proverb among the best Scotch farmers, "Study to get your land to yield rich crops of grass, and you will then assuredly get abundant crops of any kind of grain from it."

And on another.—It was not only my own practice, but also that of my neighbours, when applying fresh or "green" byre-dung to a field, to allow something less than one-half the quantity that was laid on of old, manufactured manure; because experience had taught us, that this would produce equal results on the field. After all, I am quite satisfied, that one kind of dung suits a given soil better than another; and also, that in different soils, the same kind of crop will answer better with different kinds of manure. A due attention to these truths, which I hold to be indisputable, would very much narrow the grounds of controversy as to the superiority of fermented and unfermented, &c. &c.

Excuse this hastily drawn up and desultory paper, and I may hereafter, perhaps, send you something more leisurely and compactly jointed.

Yours very sincerely,
ABREDONENSIS.

Cavan, 15th May, 1847.

[We shall be most happy to give a place to the future contributions of our Correspondent.—ED.]

From the Cobourg Star.

THE POTATO INSECT.

This insect has made its appearance here, and as insects are by far the most numerous of all animated nature, the minuteness of some makes them easily overlooked, the agility of others renders the catching of them difficult, so that all the research of man has only extended to about 11,000 species; these are to be found in the Linnean system of Nature. It is thought by Naturalists there may exist many more not yet described; I am not certain whether this insect is known or not, but certainly it belongs to the family of Chrysomella, division Oleraceae, of the Linnean system, smaller than the turnip fly, black, and on the slightest alarm jumps where it cannot be seen. It pierces the leaf in holes,—cuts the nerves and kills the plant; there are 270 species natives of Europe, belonging to this family, destructive of different plants. The potato fly likes all plants having its flower like the potato,—the turnip fly likes all the cross shaped flowers, as the radish, the turnip, the cabbage, &c. Is the study of Entomology of any use? What is to be done, to destroy or counteract its effect? if no remedy is applied, 3 or 4 weeks will decide the fate of the crop. I would suggest that plaster, ashes, or lime be sparingly thrown over the plants attacked, in the evening, or after rain, in all cases, by so doing, we are feeding the plants, and the dust that may collect on the leaves will hinder the insect, and if any animal matter exist in the soil, by using lime ammoniacal gas is generated, which no insect likes.

S. H.

Cobourg, 1st June, 1847.

FOR SEA SICKNESS.—Take as much cayenne paper as you can rightly bear in a basin of hot soup, and all sickness and nausea will disappear.

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