

AGRICULTURAL.

[From the New England Farmer.]

WHEAT.

The efficacy of lime in wheat districts, has led to the more general rise of it as a stimulating manure. New soils, even where limestone does not exist, are more suitable to the growth of wheat than older soils of the same character. The components of soil are several and different. The following ingredients enter into the constitution of soil in a general sense, viz: earths, metallic oxides, salts, vegetable and animal matter and water. The earths are chiefly clay, sand and lime. Iron is the most abundant metal; saline substances constitute an important although a small part of soil. The mould being decomposed parts of animal and vegetable bodies is called virgin soil. By a happy mixture either naturally or artificially of these several parts in due proportions, the soil is adapted to the growth of any species of plant. The analysis of a Mr Thær has shown that the best wheat land according to his observation consist of 71 per cent clay, 10 per cent sand, $1\frac{1}{2}$ per cent carbonate lime, $11\frac{1}{2}$ per cent virgin soil, in 100 parts. The necessary difference between lime and limestone or carbonate of lime to produce the same result, I have no means of determining. The fact however is the same, viz: that actual analysis has demonstrated what actual accidental experiment has proved. These facts should encourage the farmer to further experiment on his exhausted soils, in order to bring them back to a state of nature or adopt them to the production of the most important and profitable crops.

The presence of lime in the form of carbonate in regions destitute of limestone *in situ*, as for instance in a newly cleared region, is attributable to the slow acquisition from animal remains and the like, for ages before. The most insignificant means by accumulation produce the most efficacious result, so wonderful is the operation of nature. Nothing is lost or is inert, but a ceaseless change is apparent, and in busy effect.

The diseases of grain are often attributable to the growth of parasite fungi, upon the several parts of the living plant. The smut of wheat has been effectually eradicated by sifting out the poor imperfect seed, which process also rids it of cockle and other weeds, than washing and mixing it afterwards with quick lime. This article probably acts in a two fold way: by stimulating the young plant to great vigour and by the destruction of whatever *sporidia* or germs of smut are dormant in the envelopes and skin of the wheat. Adjacent fields show distinctive marks of the use or neglect of this precaution. Probably a similar application would destroy that more fatal disease, the rust.

Another serious enemy to this most valuable grain is the "fly," an anomalous insect of which nothing certain is known. Its ravages in this section of the country have been great. Notwithstanding all our inquiries relative to its habits we could gather little information of much value. So general is the ignorance of the necessity of precision on matters of entomology, and so neglected have been all efforts to afford a better and more skillful determination of the economy and destruction of insect pests among the agricultural community, nothing but personal observation can satisfy the enquirer. Arriving at a season too late to detect the intruder in its ravages, or secure its chrysalis change, we could only learn the effect of the soil instead of the operation of means. The worm or larva has been more looked after than the fly, and while the former is described as resembling a flax seed and be-

ing quite within the husk, the latter is described in general terms as a "fly," something like a house fly, only slimmer, but with two or four wings, deponent south not.—A writer in the Albany Cultivator, seems to think it identical with that "seen in pen pods preying on the tender pea." We know of a single insect only inhabiting that plant in that stage of growth, a small beetle called the "bug" which is no "fly" by the way, (*Bruchus Pisi*.) The insects hereabouts quit the grain and probably undergo a change in the earth while the pea bug remains behind, to add to the delicacy of green peas, or to devour the seed when dry. Efforts have been made to avoid its ravages through early or later sowing, but probably a change to a new variety of grain would be advisable. Information on the habits of the insect is indispensable before much good relative to its extirpation can be expected. Specimens should be collected and preserved in all stages of the growth of the ravager, to facilitate the inquiry of the occasional and intelligent traveller. We respectfully invite attention to the subject, assured as we are of the benefit likely to accrue from it.

J. L. R.

Lancaster, N. H., Feb. 1838.

The subjoined extract has been handed to us by an obliging friend. We were not unaware of the fact which it relates. Similar examinations have been made with respect to the roots of the Indian Corn; and they have been traced a distance of six feet below the seed. What nourishment they can find in the cold subsoil, it is beyond our sagacity to determine or even to guess; but they are themselves the best judges of what they are looking for. We have no doubt, for experience has well attested the fact, that if the subsoil could be loosened thoroughly by such a plough as is described in the Agricultural Commissioner's first Report, and made accessible to air and water and heat, all which would be effected by loosening it, some chemical action conducive to and connected with vegetation would take place; and great benefits result from it. In Great Britain the operation of the subsoil plough has been stated to have doubled the crops.

DEPTH OF WHEAT ROOTS.

"A few years ago, Mr Paddock, a very sensible and considerable farmer in Pyadon, in Oxfordshire, having occasion to dig for the foundation of a building, in a field at that time under a crop of wheat, was much surprised by observing that the small fibres of the roots of the wheat had penetrated much deeper in the earth than he had any idea they did. He endeavoured to ascertain how deep they could be traced through the different strata of the earth. For this purpose, he had the ground opened close to the plant of wheat, and dug perpendicularly down to the depth of six feet; and having fixed a narrow board close against it, proceeding in the same manner on another plant; and so on till he had secured the earth to that depth between the four boards firmly lashed together. He then had it placed upon an inclined plane, and, carefully removing the boards, with great caution and perseverance washed away all the earth adhering to the root and its very small fibres, and was very much surprised at their extent. He repeated the trial on several others plants of wheat, and traced their average depth to between five and six feet."—*Transactions of the Society of Arts, Vol. 48.*

MR DAWSON,

SIR,—A few days ago a most astonishing phenomenon appeared to a respectable and creditable inhabitant of this settlement, which, probably, some of the learned readers of your Bee may account for from natural causes.

On a moonlight night, the person alluded to, went out with the intention of shooting wild geese, in a piece of open water, in Savage Cove (so called), situated at the west end of the Big Island in this place. After sitting some time in his ice house, watching the geese,—it was about two o'clock in the morning, and the moon had just gone down—when he observed, far to the westward from him, and at a great height in the sky, a luminous object descending, which he at first took to be one of those meteors, vulgarly called falling stars, but was much surprised at seeing it rapidly approaching him. It so illuminated the atmosphere, that he could see every object around him; when it had come within about twenty or thirty yards of him, and from fifteen to twenty feet above the earth, it hovered in the air, shaking and fluttering its wings, after the manner of fishing hawks when eagerly looking for their prey. Its wings, he says, were similar to the flaps of a saddle. It then descended a little, hovering and fluttering its wings, as before; and again ascending, acted in the same manner. This it did several times, alternately descending, ascending, hovering, shaking, and fluttering its wings, like an animated being, and at last descending altogether, and skimming the surface of the water and ice, with a quick motion towards the mouth of the harbour, it disappeared.

In describing this strange appearance, the person who saw it, says, its back exactly resembled a kite, but that its front, or fore part—for it turned round, so that he had a distinct view of every part of it—partook of the "human form divine," being about the size of a child of four years of age—the back and lower part of its body being like the red face of the full moon; but that from the breast to the top of the head it was as effulgent as the sun in his meridian splendour on a summer's day; so that he could not look steadily at it, but drew his cap over his eyes. He says that at such a superhuman and preternatural sight, he was very much affrighted,—so much so, that like Belshazzar the king, when he saw the handwriting upon the wall, "his thoughts troubled him, so that the joints of his loins were loosed, and his knees smote one against the other," and when he attempted to walk away his limbs refused their natural functions.

I endeavoured to persuade the man that as it was the time for natural rest, he had insensibly fallen asleep in his ice house, and that it was all the vagaries of a bewildered fancy in a dream, to which he coolly replied, that he was perfectly awake, and though much agitated, was quite in possession of his senses, and that the occurrence, in every particular as he had related it, was real, and no dream or fiction, and that he was as conscious of the reality of what was passing before his eyes, as he is of his own existence, or of any other transaction in his life.

Now, sir, as the person who narrates this strange story, is a man of veracity, and I implicitly believe him, especially as he is no wise given to the marvellous, or hyperbole in his conversation, I am very desirous that one of the learned readers of the Bee would endeavour to explain this singularly strange phenomenon, upon the principles of meteorology, or in some other way.

I am yours, &c.

R****.

Merigomish, 30th April, 1838.