

the invading columns. Often did the Moslems shake their heads, and predicting sooner or later the destruction of his garden, exclaim against the wickedness and folly of the Nazarene in attempting to avert the decrees of fate. At one time it had been hoped that this beautiful spot, a favourite resort of the Europeans, had been saved; for, whilst all around had been rendered bare and desolate, the garden yet retained a luxuriance of vegetation. But the day soon came in which the Moslem's predictions were to be fulfilled. The locusts, ceasing to be crawling grubs put forth their wings, and took flight. Myriads and myriads, attracted by the freshness, alighted on this oasis of the desert, and in a few hours every green blade disappeared; the very bark of the fruit-trees being gnawed in such a manner as to render them incapable of producing fruit the ensuing year.

Agricultural Journal.

From the American Farmer.

WHAT IS THE PROPER FOOD OF WHEAT?

This is a question much easier asked than answered; for though it has been mooted at intervals from the earliest introduction of the wheat culture, it never has been satisfactorily answered, and we question very much, whether it ever will be, so as to render the solution of it generally available; but still we may be able to form something like an approximate opinion through the aid of the laws of analysis. By resorting to these, we find what are constituent elements of the wheat berry, and hence the inference is that if we can apply substances to the soil containing these elements, of a soluble character that we will approach as near as is desirable to furnishing the appropriate food for the wheat plant. The next questions to be considered relates to the quantities of the several kinds to be applied to the acre? How far climate may operate to facilitate or retard their solution? It is plain that before the rootlets can take up food of any kind, that it must be reduced to a liquid or gaseous form and it is equally plain that this condition of the papulum, from which they derive their support, can only be brought about through the agency of heat, air, and moisture, as while all vegetable bodies must undergo decomposition, so must those of a mineral nature be reduced by the action of water. As connected them even with the proper quantities if the proper kinds of manure could be ascertained, the seasons and the climate exert most potent influences, either for good or evil, in the growth of the wheat, or any other kind of vegetable production; hence what might prove salutary one year would be otherwise another. But let us consider of what wheat is composed. By the analysis of *Springle*, a thousand pounds, or say, 16 2/3 bushels of wheat, leave

Of Potash,	2 25 lbs.
Of Soda,	2 40 lbs.
Of Lime,	0 96 lb.
Of Magnesia,	0 90 lb.
Of Alumina with a trace of iron,	0 26 lb.
Of Silica,	4 00 lbs.
Of Sulphuric acid,	0 40 lb.
Of Chlorine,	0 10 lb.
Water,	11 27 lbs.

Thus then, if this analysis be accurate and *Springle's* reputation is guaranty that it is, the inference is a fair one, that, as the above constituents are to be found, in the *Berry* of the wheat plant, the Soil should be provided with each and all of the substances enumerated, either in greater or lesser proportions, in order that the preparation of the plant might be going on. In every soil alumina (clay) and silica (sand) are always present, and form the greater quantity of the latter found by analysis, as a constituent element, we should infer that notwithstanding wheat is said most to delight in clay soils, still that sand is indispensable to the fructification of the grain. We know that unless there be a sufficiency of *Potash* in the soil to dissolve the silica, and yield it to the plant, that, as a natural consequence the stem will lack that ingredient essential to enable it to stand erect, and from the evidence afforded by the analysis we should conclude that ashes, potash, and lime are indispensable to the successful culture of wheat, and that salt be found to be a valuable auxiliary; nor should we apprehend so much dread as is indulged in by some, if the lime used were of the magesian kind.

It may be said, that because we find these various substances in wheat, that is not conclusive proof it derives it exclusively from the soil. We admit this supposition most freely, inasmuch as we are satisfied, that a very sensible portion of the food of plants is derived from the atmosphere, and that this portion is as well appropriated by the leaves as by the roots, by the latter process the most

when by the organic remains or mineral manures used the powers of absorption retention and assimilation, the soil have been accelerated to activity. From the presence of sulphuric acid, we should take it for granted that plaster is almost as essential to wheat as it is to clover. We are aware, that this opinion will not be considered as orthodox by a very large description of farmers, who will tell you that plaster increases the straw but decreases the grain. Now we are not sure that this opinion of theirs is well founded if after the use of plaster such result may have been produced, may it not have sprung from other causes than the use of plaster? May not the weather, an excess of rain or nutritive manures have produced the result, and not the plaster; If the theory of the action of plaster, which strikes us as most rational, be the true one, its most essential office is to husband and dole out gaseous food, according to the wants of the plants, rather than to stimulate them by improvident and too luxuriant feeding. If this were not the case we should think that the minute quantity required for an acre would not answer the valuable and wonder exciting purpose that it does. If its office, of its self, were merely stimulative, its effects would be less manifest and less lasting, nor would those effects be visible beyond a single season; hence we infer, that, besides its direct agency it exerts an indirect one, as a *caterer*, if we may so express ourselves, still more important. Again those who deprecate the use of plaster directly to the wheat crop, do not hesitate to use it on clover, and turning that in with the alter-math to grow wheat on it. Why then, if plaster exerts so unfavourable an influence when applied as above first stated, is it then sown on the clover that wheat escapes the assigned injury? This is a question as difficult of solution, as is the one with which we began this article; for as the plaster requires many hundred times its own body of rain to dissolve it, it must necessarily continue its action through several seasons and successive crops.

We have thrown out these remarks merely as suggestions, in the hope that the question of—"What is the proper food of wheat?" may draw out some able correspondent whose knowledge, observations, and experience may enable him to throw light upon the subject.

From the Maine Cultivator.
MANURE-COMPOST.

Manure is virtually the farmer's capital; the bank, if we may be indulged the expression, upon which he can alone draw for those important and essential accommodations without which his industry and economy in other matters will be of little or no avail. There is not a farmer in New England whose resources in this particular, are amply abundant, and whose farm, might not in a short time be brought to almost any degree of productiveness the owners could reasonably desire. Nature has provided, by a wise economy, that nothing which has once been inspired with the energizing identifying principles of life, shall be worthless in the great work of perpetuating and nourishing its kind. But it is not simply to the animal and vegetable kingdoms, that the farmer is to look for the means of enriching his soil. The various mineral substances embedded in, and constituting to a certain extent, the surface of the soil upon which we tread, are endued with certain distinctive and emendatory properties which render them efficient assistants in the labour of improving and enriching our fields. Even the hard and compact substances of flint, capable of yielding upon decomposition, a principle essential to the growth and nutriment of plants; while the various mineral substances of our common fields or gardens, are capable when commingled in proper relative actions, either of weight or measure, of evolving principles not only highly beneficial to the health of plants, but indispensably necessary to their successful development and growth. In the formation of compost manure, one thing, however, is indispensable, and this is that we attend strictly to the nature and constitutional character of the soil to which it is to be applied. If it be of a clayey, or argillaceous texture, the basis of the compost intended for its amelioration, should consist principally of sand. But if on the contrary, it be of a sandy or silicious character, the compost should be mostly of clay. Soils that are naturally humid, should have such alterants applied, and in such quantities, as will bring them to a proper consistency; while those that are arid and liable to injury from a too rapid descent or evaporation of water, must be modified by the application of such remedial agents, as will tend to confer unctuousity, and prevent

the possibility of injury, from such a cause.

The most tenacious clays, and the most barren sands, may, by the application of such materials as tend to modify their obvious defects, be made wonderfully productive.

VENTILATION OF COWHOUSES.

Every one knows that pure air is necessary for respiration, and that air on being used by the lungs is expelled in a deteriorated condition, and rendered unfit for being again inhaled. If therefore, cowhouses are not properly ventilated, the air becomes foul from the respired air, as well as, perhaps, from impure exhalations, and the air so deteriorated is rendered unfit to maintain health. In the neighbourhood of large towns, too, there is another predisposing cause to disease, viz., the unnatural forcing of a cow's milk by a too liberal supply of brewer's draff. Fresh supplies of air, that the blood may be purified, are essential objects of a respiratory apparatus, and if the blood that goes to the lungs is returned to the system in the same state as it is sent, death will be the consequence, for venous blood is poison to the body. It does not often happen that imperfect ventilation produce immediate death, but it is too often the real cause of inflammation, fever and deadly distempers.—Correspondent of Mark Lane Express.

From British Husbandry.
NECESSITY OF CAPITAL IN FARMING.

We frequently see indications of a strong desire in the farming community, to undertake larger farms than prudence would allow, or than a limited capital could possibly stock or cultivate properly: by which means the parties thus acting not only find themselves embarrassed in their circumstances, being not only unable punctually to meet their engagements, but under the disagreeable necessity of neglecting something or other which they know requires immediate attention, in order to obtain therefrom any ultimate gain or advantage. To be aware of this cannot fail at all times to be both irksome and annoying; and the better the farmer understands the management of his crops, &c., the greater will be his mortification to see his lands neglected for the want of sufficient capital to enable him to cultivate them properly. Moreover, we have sometimes known it happen that a farmer, in consequence of want of capital to enable him to manage his affairs properly and judiciously, has undeservedly acquired the reputation of a bad manager, which ever after has stuck to him, when, had he possessed the means, not any of his neighbours would have cultivated their farms better or more judiciously, nor have sustained a fairer reputation among the best class of farmers.

The disadvantage in a larger farming business, than a person's means will warrant, is certain to involve him who does so in a numerous train of difficulties, and to reduce his profits upon all the produce which he may have to dispose of. If his capital will not allow him to purchase sufficient stock of the proper kind and quality, it cannot but be clearly apparent that his profits upon this particular head, will be smaller than they otherwise might have been. And as respects his crops, either the requisite amount of labour and expense will not be bestowed upon them, or else not in due season; so that under ordinary circumstances, it would be absurd in him to look for as good crops, as others on the adjoining farms where ample means had been enjoyed, of bestowing all necessary care and expense upon them. Then, as regards markets, the needy farmer is ever obliged to have recourse to his stock or his stock-yard, to meet both the direct and incidental expenses that may come against him and his establishment, whereby he has not an opportunity of regulating his sales by the rise or fall of the market prices, for he must sell, however low the market may be, in order to meet the ordinary payments that are continually coming against a farmer, for domestic supplies, wages, &c. How differently off is the farmer who has got a little surplus capital where he can at any time command it, should an advantageous outlay warrant its investment. Besides, should an unfavourable season take place, or a great depression of prices in agricultural productions occur, he will then be able to reserve his stock and crops instead of disposing of them at a great disadvantage, his small reserved fund or capital being sufficient to meet all immediate demands. An anonymous writer, but evidently a person of experience, makes the following very judicious remarks:—"The bad success of great

numbers of farmers is owing to having sufficient capital to beg which invariably involves them in culties, and reduces their profits upon every article of produce. Their farms are unstocked; they necessarily sell at a disadvantage; their fields are scarcely half cultivated, and in a short series of years, unless some lucky hit sets them up, they become abjectly poor, in spite of all possible industry, judgment and application."

Next to the want of capital in farming in order to insure success, is the want of judgment; and where this is the case, we usually find either too much, or too little stock upon the farm, and the kind and quality of it not at all proportioned to the nature and extent of the productions of the soil. One would suppose that it required no great deal of experience to be aware of the fact, that ten milch-cows well fed, and properly attended to, will yield a greater profit than twelve, or even fourteen that are ill fed and otherwise neglected. But too little stock, as well as too much may be kept, and either extreme is equally wrong. It is not, however, altogether in the improper manner of stocking a farm, that the want of judgment is apparent, since the nature and amount of agricultural implements necessary to carry on the various processes of husbandry upon a farm of extent, should be clearly comprehended by the practical farmer; for where there are many more implements and utensils than are really necessary, it is ten to one that those not in use will not have proper care taken of them. Besides capital thus invested would be uselessly sunk. On the other hand, a deficiency of those things most commonly employed about a farm is a continual inconvenience, and often causes a great sacrifice and waste of time.

The foregoing observations are perfectly correct. Without sufficient capital to stock a farm properly with cattle and implements, and to pay for the labour necessary to be expended in the judicious cultivation of crops, it will not be possible to farm with either credit or advantage to the farmer however well qualified he may be in every other respect.

SUGAR BEET FOR MILCH COWS.—An intelligent gentleman from the eastward, assured us a few days ago, that by giving his cows a peck of sugar beet twice a day, cut up with their hay, he was enabled to get just as rich milk and butter during the winter, as in summer, when the pasture was at its best. Now, as an acre of ground well manured, planted in this root, and well attended, would yield beets enough to keep ten cows, from the 1st of November till the 1st of May. Should not every farmer make his arrangements for planting beets this spring? From our own experience, we have no doubt, that this addition of beets to the ordinary feed of the cows, would make a weekly difference of 2 lbs. each, in their product of butter. From the 1st of November to the 1st of May there are 29 weeks. This number of weeks at 2 lbs. additional butter, would give us 52 lbs. for each cow during the period named, or 520 lbs. for the ten cows, and if we set down the butter as being worth 25c. per lb., it will give us \$130 as the value of additional yield brought about by the feeding with the product of an acre in beets. But this is not all—the proprietor of the cows in the spring, would have the gratification to know, that he had treated his animals well, and the satisfaction of seeing them in good condition.—*Farmer and Gardener.*

TO CURE SCRATCHES IN HORSES.—Wash the feet or parts affected, with soap suds, wipe them clean and dry, and then apply white lead ground in oil, as thick as can be smoothly and evenly laid on. Exercise moderately, keep the animal dry, and in most cases, the first application will cure effectually. Should a second be necessary, wash off the old lead, and apply with a brush as at first. Six or eight days should intervene between the application.

STAGGERS IN SWINE.—To cure this disease, DeGrauchy recommends cutting a knot in the roof of the mouth till the animal bleeds liberally, and then rubbing it with powdered loam and salt; and giving it a little urine to drink. Pigs have openings on the inside of the fore legs below the knee, from which, when in health, a small discharge is kept up. A stoppage of the staggers; and rubbing them open with a cob or other rough material, will usually effect a cure.

RATS.—Tar, or birdlime laid in their haunts, will stick to their fur, and cause their departure.