

## AGRICULTURAL.

FOR THE WEEK.

## MANAGEMENT OF STOCK.—NO. 17.

MR. DAWSON.

Sir,—Stock is a phrase well known among farmers, as meaning the bestial upon the farm. I have often heard a complaint with farmers that they are slaves to their cattle in this country. As the business of managing stock is now conducted by many there is some truth in the assertion. As I think there is a radical defect in the system, I shall do my endeavours to point out a radical cure.

The great object in view as yet has been to raise hay to keep or feed stock; as beef has been selling for some time past, this is not a lucrative concern: if there be two thirds or three fourths of the farm under hay, yielding from a ton and a half to two tons per acre, which I conceive is fully an average upon the most of farms, there will be but little profit at the year's end, whereas by adopting the system prescribed in this series of essays, attending particularly to No. 8, for a rotation of crop, there will then be only two-fifths in hay, but although the extent of land is lessened, the weight of hay will be increased, as from two to three tons the acre will then be produced, but that part of the farm which is in green crop, is where the profit upon stock will chiefly arise. A comparative statement of the profits arising from three acres under the old system and the same number under the new, may set this in a clearer point of view than any other way that now occurs to me: we shall allow that there is pasture for the summer exclusive, in both cases. Suppose that under the old system the three acres yielded six tons of hay, this will feed a yoke of heavy oxen through the winter, the profits upon which may be £8. Now we shall suppose that one of the three acres under the new system is in turnips, one in hay, and one in wheat, the one in turnips yields fifteen tons, the one in hay two and a half, and the one in wheat one and a half of straw—this will feed at least three oxen of equal weight to the former, the profits upon which from the superior quality of the beet may be £15. This shows a balance in favour of the system here recommended of £7, exclusive of the crop of wheat yielded by one acre, which will meet the additional expense attending the management. At this rate, the occupier of thirty acres of land under tillage, loses £70 a year by adhering to the old system. Some may say that this looks fine upon paper; I would answer, give it a fair trial, and it will look fine upon the field, and finest of all when you count the dollars. I have just now seen the estimated expense and profit attending the keep of a cow, from the "Genesee Farmer," (see *BEV.*, No. 21.) by which it appears that the produce of three acres is required to keep the cow through the year, the profits upon which are \$8 50; this divided by three the number of acres, quotes \$2 83, as the profits upon each acre. I shall now contrast with this, the expenses and profits upon the keeping of a cow, by what I call the new system. We shall allow one half acre for summer pasture, one eighth do. of tares to be cut green and given in the house, one eighth in turnips yielding say two tons, the straw produced by a quarter of an acre, and the hay produced by another quarter, say 13 cwt. The expenses and profits will then stand thus:

Expenses.	Profits.
Pasture, £1 0 0	200lbs butter at
Tares, 1 0 0	9d per lb. £7 10 0
Turnips 2 0 0	40lbs cheese, at
Hay, 1 6 0	4d per lb. 0 13 4
Straw, 0 5 0	A calf, 0 10 0
£5 11 0	£8 3 4

The balance standing to the credit of the cow will then be £2 12 4, and this upon the yield of one acre and a quarter—the wheat produced upon a quarter of an acre to meet the extra trouble of attendance.

I might go on in this way making calculations with respect to every description of stock, upon the farm; but as the result would be much the same, I think it needless I shall in my next, offer some general observations on the management of stock; and if I can find time, take a retrospective view of the whole course, and so conclude my proposed plan.

Yours truly,  
OLD RUSTICUS.

[From the New England Farmer.]

## LEAVES FOR MANURE.

Few farmers are apprised of the value of leaves, and the soil which is formed by their decomposition for manure, and later for cattle. A correspondent of the Bath Agricultural Society, in England, warmly recommends a species of manure, especially for potatoes, which is very easily procured by many of our cultivators, and we think, deserves more attention and more frequent use than it has generally received. It is the employment of fallen leaves, and the mould which is formed by their decay, taken from woodlands. This, the writer observes, he has found an excellent substitute for other manure; and that the potatoes raised from the application of rotten leaves were more dry, mealy, and of a better flavor than those which had been manured by other substances. A writer in the *N. E. Farmer*, vol. vi. p. 102, states, in substance, that the comfort of cattle would be insured by a supply of leaves for litter. That fallen leaves make a warm nest for hogs, which will much assist in their fattening. The gathering of leaves, where wood and is near, is much attended to in the best cultivated parts of Europe. The Swiss, who have to support a thick population on a rough and rocky soil, gather leaves wherever they are to be found, in their apple orchards; by the road side; and in their small cities the privilege of raking up the leaves from the side walks is paid for by the farmer. In Flanders they gather great stocks of them, and their beautiful cattle and horses have the benefit of the most abundant litter. \* \* \*

The gathering of leaves may be greatly accelerated by suitable management: a cart with ladders fore and aft and long slats of boards from ladder to ladder, to secure the heaps, a sheet of tow cloth two yards square should then be laid on the ground, and the small heaps be raked into it; when full, a man ties the corners of the sheet, and hands it to a boy who keeps on the cart and receives it; he unties the bundle and lets the contents go, and keeps treading all the while. In this way a load is soon obtained; and to the above tackling some little brush may be added to the sides of the load, to build it up, and hold on the leaves. I have tried to use baskets to load the leaves, but have found the above sheet to work easier and quicker, and in order to make it more durable, I have had a small rope sowed round the edge of it, and let out about eighteen inches at the corners, which makes it easier to tie, and secures the sheet from getting torn. Such a sheet will cost about one dollar.

In the use of leaves the hogs excel, for whether as a litter in the covered part of the sty, or whether thrown in moderate quantities in their yard, when mired, they soon work them and secure them from the power of the wind. When used for littering cattle it is absolutely necessary to work them with the dung. When the floor is cleaned in the morning, the dung, urine, and leaves should be well worked and chopped together with the shovel, before they are thrown out upon the heap; if it is not so

done, the wind will surely take hold, and disappoint and disgust ensue; when so mixed, they will soon dissolve in the ground, and seldom any traces of them can be seen in the fall when the potatoes are dug."

The same ingenious and scientific cultivator observes as follows:

"I have fixed my styes in such a manner as to have a small loft over them for leaves, with openings at the sides to draw out the leaves with a rake and supply the hogs occasionally with fresh litter. I have also enclosed part of a shed in the barn yard to store up a quantity of leaves to litter my cattle through the winter. The advantage is not confined to the mere addition of leaves to the dung hill; it furnishes the means of preventing the waste of the urine of the cattle, and renders them more comfortable.

Another writer in the *N. E. Farmer*, is of opinion that leaves for manure should not be used too profusely. He thinks they should be used together with straw or refuse hay in the proportion of about one to four. And it may be the case that the tannin principle, and vegetable acids in leaves, when employed in too great quantities may prove injurious in some soils and for some crops. Further experiments on the subject are desirable. Perhaps a little quick lime scattered over the leaves at the time of their mixture with dung, or other manure, would neutralize and destroy such acids as might otherwise prove injurious.

## NEW INVENTION.

COCHRAN'S MANY-CHAMBERED NON-RECOILING RIFLE.—A young man of the name of John W. Cochran, a native of New Hampshire, in New England, has invented a species of fire-arms, applicable to the heaviest piece of ordnance or the smallest pistol, which if brought into general use, would soon put an end to a war, or which would be still better, it would be a wonderful help to the powers that be, in inventing reasons for avoiding it altogether.

This young man, having received no encouragement in his own country, went to England and France, and exhibited his discovery to the Sovereigns of both countries, but without success, when at the suggestion of the Turkish Ambassador resident at London, he went to Constantinople, and exhibited it to the Sultan who patronised him, and rewarded him on a most magnificent scale, and on his return to America, gave him a large order for fire-arms of every calibre, on the new principle, for the use of the government.

This deadly weapon is capable of being fired 100 times in 15 minutes, during which the piece itself, if a cannon, acquires a heat of 650° of Fahrenheit, and the revolving cylinder which contains the charges 250°; but if a rifle, it is capable of being fired 500 times in succession, without producing any expansion whatever in the chambers of the cylinder, or giving it a greater temperature than 100° of Fahrenheit.

As an instance of the deadly effect of this rifle, Mr Cochran, at a bear hunt lodged nine balls in the animal's brain, almost at the same instant, while he was at full speed, and brought him down.

The following is a description of the models now exhibiting at New York, as given in the *Boston Daily Advertiser*.

The cylinder is a solid piece of iron revolving in the plane of the barrel, and occupying a position directly at the base of the barrel, which it is in close contact with. The dimensions of the cylinder are in diameter about 4 inches, and in thickness 7/8ths of an inch. There are in this one nine open chambers for the charges, which chambers are perforated upon the periphery and converge like the radii up-