

The Real Benefit of Machinery.

Those who depict so eloquently the pleasures of modern farming by machinery, draw more on their imagination than their experience. I have tried it, and while I do not despair, I am often discouraged. I have a machine with which I can, and do, turn the grindstone, cut fodder, thrash, grind the grain, drive the cider mill, saw wood in the log with a drag saw, or cord wood with a circular saw. This it will do, and do well, but oh, the care of keeping all these things in order and getting them to work well. I have a potato planter, that at one operation marks out the rows, cuts the potatoes, drops the seeds, covers them up, and rolls the ground. Also one that drills twelve acres of corn and beans in a day, and does the work well. We have cultivators that leave very little to be done with hand-hoes. We have mowing machines and reapers that leave little to be desired in this direction. The tedding machine shakes out the hay as well as it can be done by hand, and five times as fast, the wooden revolving rake pulls it into wind-rows, a pitching machine attached to the back end of a waggon will, carry the hay on to the load, and a steel toothed sulky rake makes all clean. Then at the barn we unload with a horse fork, and the farmer can sit in the shade smoking the pipe of contentment as he witnesses the operation. Then we have a machine for milking cows, and another to work the butter, while, if you make cheese, the American vats and presses make the labour mere child's play, compared with the old Cheshire system. I have not tried these last named machines, but I have little doubt that they work as well as some of the others I have named. The grain binder, too, I have faith enough to believe will soon be attached to every reaper, and then with a steam plough and a good potato digger, won't farmers have an easy time? Not a bit of it. If these things would run themselves; if they never got out of repair; if they had no disposition to lie round loose, but would put themselves up, then indeed we should be "gentlemen of leisure." But this will never be. We can change our work, but we can never get rid of it. If we do not work with our muscles, we must with our brains. And the encouraging feature of this age of invention is not that these "labour saving machines do the work so much cheaper, as that they change the character of the labour required in agriculture. They lessen back-breaking drudgery, and increase mental activity. A farmer who uses a good deal of machinery cannot be dull and stupid. It will make a man of him. I expect great things from the young farmers of America. There is everything to encourage them: soil, climate, social position, political influence. The destiny of the country is in their hands. But they must not expect to live lives of ease and luxury. Brains rather than muscles will be required in the new condition of our agriculture. Machinery will stimulate mental activity, and encourage the growth of that rare grace, patience."—Harris, in *Am. Agriculturist*.

Smut in Wheat.

The prevailing opinion among European writers is, that smut in wheat is caused by an insect—an eel-like worm—which is said to be in the seed-wheat when sown, and by the moisture communicated to the seed in the earth the insect is enabled to burst the walls of its prison, and, escaping, rises to the surface and secures a lodgment between the leaves of the growing plant, near the centre—as the grain where it begins to develop. It then works its way to the head of the growing wheat and makes its entrance into the embryo grain, which destroys the natural development of the wheat and causes the diseased transformation which we call smut.

In the Ohio agricultural report for 1857, the able and efficient secretary, J. H. Clippart, furnished an article with several illustrations, giving the natural history of the insect and its effect upon the wheat plant. The facts given were chiefly derived from the observations of British and continental European writers, and it may be considered presumptive in us to attempt to controvert such distinguished authority. But we will, nevertheless, venture the opinion that the worms found in the diseased grains are rather the effect than the cause of the disease. All diseased bodies, whether animal or vegetable, are subject to peculiar kinds of parasites. The diseased state of the subject furnishes the requisite conditions for the propagation and development of the insect. We know this to be the case in thousands of instances, and judging from analogy it may be so in the case under consideration. The insect is denominated the *Anguillula Fritica*.

In the *Journal de Agriculture Pratique*, M. Montagne, who draws his information from a French naturalist, who has given the subject much attention,

gives the following as the means most efficient to prevent its increase. It matters less whether the insect is the cause or the effect of the disease provided the remedy is effectual.

The author, as a substitute for lime as usually applied, which he says has no good effect upon the living insect, recommends acidulated water, composed of one part sulphuric acid to a hundred and fifty parts of water, in which the wheat is to be steeped twenty-four hours, this he asserts will effectually destroy all the *anguillules* contained in the grain. This process of preservation is neither expensive nor difficult to carry out, and that the germinating properties of the grain are in no way injured by it.

It is also recommended that the screenings from diseased grain be taken care of so as not to find their way back to the fields in the manure or otherwise. It should either be burned, or, if cast to the fowls or other farm stock, it should first be submitted to a temperature sufficient to destroy the life of the insects.

We throw out these hints for what they are worth, hoping that they may lead to such observations as may furnish additional light upon the subject.—*Colman's Rural World*.

Helping the Soil.

THE good farmer does this. Nature does not always make a perfect soil—indeed but seldom. Then the farmer's aid comes in excellently. He is supposed to be a man of understanding; if not, he had better be employed in something that he has capacity for. The means to help a soil are not scant. What ground generally lacks is manure. Manure is the best one ingredient that can be applied, as it contains the principles of many others. It moistens soil; it mellowed it; it drains it; it guards it against frost and sun. It is for this reason that so much manure is used, and, comparatively little else. People will do without a sub-soil plough, without ditching, without a mowing machine, without even a horse rake; but they use manure, more or less. It is well for the land that this is so. Nature has made some soils too wet for farming purposes—though to meet her end they were properly made. The farmer need not be told that, to help this soil, he must drain it. He then gets the underdeveloped richness. Pulverizing it and stirring it deeply, so that the heat and air can get down, is another great thing. These are the main things—simple, yet how little done.

Nature gives you the soil; you help her, and she helps you in return—helps you while you are doing it. She keeps your ground moist when you mellow it; and she lets the air pass into it with its fertility which she took from negligent barn-yards—and this fertility she leaves with the soil—so that the farmer and nature are helping each other. Thus our farms are improved. How are they deteriorated? By just the opposite course—by neglect. The more we do for our farms, the more nature will aid us; and thus the better will be our land. The truth is, we are only helping nature at the best, and she pays us for what we do for her: the land is still hers: she forever holds the title deed.—*Colman's Rural World*.

RAISING POTATOES UNDER STRAW.—"On a recent trip in the St. Clair County, Ill.," says friend Colman of the *Rural World and Valley Farmer*, "we saw hundreds of acres of land covered with straw. The ground had been ploughed and harrowed and marked off, and potatoes dropped, and then the whole surface covered about six inches deep with straw. The potatoes have no further attention till digging time, when two or three hundred bushels per acre are obtained. The straw keeps the weeds down, and the soil cool and moist. The straw is raked away in autumn, and there lie the potatoes white and clean. The straw potatoes bring the highest price in market."

SOURCES OF FARM MANURE.—W. H. White, of South Windsor, Conn., writing to the *Boston Cultivator* on the resources a farmer has from which to draw fertilizers for his land asks: "Does the reader make the most of his resources? Is there nothing left that can be converted into fertilizing material. How is it with the hog-pen? Is that well supplied with good material to absorb the liquid as well as the ammonia? A free supply will tend to keep the hogs clean and furnish a quantity of manure. Then there is a privy, which is too frequently allowed to waste its ammonia, instead of absorbents supplied to fix it. A tight vault, into which dry muck, plaster, loam, &c., may be introduced and mixed, will supply several loads of poudrette, superior to what the market affords, with little labour. The hen-roost will supply several barrels of good guano, the quality of which there is no question, when home-manufactured, by supply of dry loam, plaster, &c., with frequent overhauling."

Stock Department.

Summer Management of Sheep.

SHEEP are very liable to fly-blow during the showery and hot weather. They should, therefore, be carefully examined morning and evening, and any sheep that appears to be "struck" should be caught and examined. If maggots are developed, they should be scrupulously removed, and the part dressed with a lotion gently rubbed into the roots of the wool. By dissolving two ounces of corrosive sublimate in a quart of water, a very useful and appropriate lotion for the purpose is obtained.

Sheep are also much disturbed and annoyed by flies attacking their heads. If the skin is broken, caps made of calico and dressed with pitch or sweet oil and white hellebore should be put on the head. Leicester's—more especially the young rams—are subject to the attacks of these industrious little pests. A temporary shed erected in the field not only protects them from the glare and heat of the sun, but also in a great degree mitigates the attacks of flies.

Sheep that were not dipped at the time they were clipped, should now be bathed in a liquid preparation. Unless this essential precaution is observed they will be infested with skin parasites. Lambs should be similarly treated. Unless they have been well cared for, they are probably now swarming with ticks.

There are various specifics advertised for the destruction of sheep parasites. We believe none to be better than the preparation advertised in our columns by Messrs Hugh Miller & Co., Chemists, of this city. In preparing the bath, the careful stockmaster will study and minutely follow the printed directions that accompany every package. After the sheep are bathed, they should be allowed to stand in an open yard or other enclosure, free of herbage of any kind, to allow the liquid,—which is necessarily poisonous—to drip from their fleeces. We have known in our experience, several instances where numbers of sheep have been poisoned from neglecting this simple precaution. No branch of farming pays better than sheep husbandry; but in order to obtain the maximum profit, good feeding and careful management are essentially necessary.

Show-Yard Abuses.

We extract from a recent issue of *The Farmer* the following practical suggestions on this important subject. They will amply repay an attentive perusal:—

"Of abuses, the most obvious is the overfeeding of breeding stock intended for exhibition; and while its immediate effects are open to every observer, of its ultimate results we seldom hear much. Many a fine heifer, however, has foundered on her first calf, simply because she had been the fortunate winner in her section at previous Royal Shows. Victory on such terms is dearly bought; and it has often occurred to us that our congratulations to the owner should be deferred until it is certain that his winning heifer has successfully passed the ordeal of "qualification." Then, indeed, congratulations would be well timed—in a double sense, too, considering the risk that had been run; whereas these are often premature when offered as the animal passes out of the ring bearing the tokens of the judges' approval.

"Nor is the baneful practice of over-feeding confined to the female classes of our Show stock, or even to cattle. Bulls, sheep, swine, and even horses, are fed to such a degree that the animals are not unfrequently put out of shape altogether; and instead of being fit to produce their kinds, they are forced into mere wadding monsters, at which one may look with wonder, but never with genuine admiration. A true judge will frequently derive much greater satisfaction from an inspection of the same description of stock kept at home in a natural state for breeding purposes, than he will do from looking at those which carry off the honours of the Show-yard.

"It is well known that the evils of the system of over-feeding show stock of all kinds have been frequently deplored, and strong representations made on the subject by breeders, and by the agricultural press. Yet, up to the latest show of breeding stock that was held, there was not the slightest symptom of improvement. It seems strange that the parties most interested in the matter should be so much opposed to it, and yet that nothing is done to remedy the evil. The reason is simply this, over-feeding has become a fashion, and breeders know very well that unless they yield to it they may keep their stock at home, for if they ventured to show their cattle or sheep in the state these would be kept for breeding, no one would look at them.