

The Illustrated JOURNAL OF AGRICULTURE

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Table of Contents.

Farmwork for September... 51
How to keep land in condition... 51
Richard's subsoiler... 52
Compton Model-farm... 52
Dickson on practical farming... 53
Sowing pasture-seeds... 53
Cost of English country-houses... 54
Drainage... 55
Lucerne, etc., Bouthillier on... 56
Macfarlane on rape, etc... 57
Shutt on time to cut corn... 57

MANURES.

Green-manuring... 58

THE DAIRY.

Taché on mottles, etc... 58
W. R. Gilbert on Cheddar cheese... 58
Cold Storage on steamers... 60
Compton Model-Creamery... 61
Consumption of cheese in Germany... 62
Competitions of Dairy-products... 62
Butter for England... 62
Mottles in butter... 62
What's in a name?... 63
How the "100-point" cheese was made... 64
All records broken... 64
Canada and the Mother country... 64

API CULTURE.

Transformation, etc... 64

THE POULTRY-YARD.

A. G. Gilbert on profits, etc... 65
Eggs, Mrs. Dickson on... 65

THE HOUSEHOLD.

Servants from the country... 66
Miscellaneous recipes... 66

GARDEN AND ORCHARD.

Craig on Perennials... 67
G. Moore on potatoes... 67
The advantages of horticulture to farmer... 68
Pruning (continued) G. Moore on... 68
The San José scale, Craig on... 69

THE HORSE:

Horses of England, Chas. Moore on... 70

FARMERS' CLUBS:

Dr Grignon on the club of Portneuf... 70

THE ILLUSTRATED Journal of Agriculture.

Montreal, September 1, 1897.

The Farm.

FARM-WORK FOR SEPTEMBER.

The season is a very backward one, a good deal of the land in grain was not sown till very late, and, consequently, the work of CLEARING THE STUBBLES cannot be proceeded with until the middle of this month, when the sun can no longer be trusted to kill the couch and other root-weeds. In such a state of things these enemies must necessarily be gathered at once, after the grubber has brought them to the surface, and burnt carefully, so as that not a single rootlet be left undestroyed; the ashes may either be spread where they lie, or, which is better, be stored under shelter till the spring, when they will come in very handy for mixing with any bonemeal or other artificial manure for turnips, swedes, or mangels. There should be no delay in setting about this work as soon as the harvest is finished; few things save spring-work so much as cleaning the stubbles in the fall, particularly in heavy land, as if the cleaning is thoroughly done, and the first furrow for the root-crop is given before the frosts, the grubber and the harrows will sufficiently prepare the land for the reception of the manure, rendering the use of the plough in the spring quite unnecessary. Every one knows that, on clays, the plough has a tendency to produce clods, and, on sands, to dry up the land; whereas, the grubber and harrow stir the land thoroughly, keep the topsoil, finely pulverised as it is by the winter's frosts and thaws, in its proper place, and retain the humidity needed to start the seed into germination.

THE FLOCK.—The care of the flock is not troublesome this month, as the stubbles, etc., are open to them, and the rape, that all wise farmers have taken the trouble to sow, is in full bearing. And here, we beg to call the attention of all our readers to Mr. Macfarlane's letter on our page. They will see how astonished that worthy correspondent of ours was at the sight of a real field of rape, with its 100 lambs at work upon it, and how surprised he was at the description the farmer gave him of the returns in mutton and wool from a fifteen acre piece of that plant. So, it is not without reason that we have been for nearly 20 years continually pressing upon the subscribers to this periodical the advisability of providing a good sized field of this mutton-making plant for their sheep.

The ewes intended to lamb down early should now be getting into good condition, as a lean ewe seldom bears twins, and twins are highly desirable in flocks that are properly looked after, though we have heard men, who keep sheep as weed-killers, complain of ewes twinning, because the dam in such cases requires more food! Almost as silly a speech as that of Mr. Dickson's friend, the Englishman (of whom we have not the slightest recollection), who wrote, in this periodical, that he had known stock PREFER BROWN HAY TO GREEN! Of course he was referring to meadow-hay; as for clover-hay, that, if put together fresh enough in the stack,

cannot be green, the sweating it takes on there changing the colour, however green it may be when carried. The English clover-hay taken from the stack to the London markets would surprise any foreigner who had been used to barn-kept hay.

SWINE.—The early spring pigs will be getting on in flesh by the middle of this month, and a few pease will help them amazingly on the "shack" of the stubbles. See that they have abundant supplies of water and a place to wallow in at mid-day, for we have many a hot noon in September.

Take care that THE COWS do not fall off in milk, should a dry time ensue; but you know all about these regular duties quite as well as we do.

GLOUCESTERSHIRE CHAMBER OF AGRICULTURE.

Drainage—Surface grips—Turf—Rotations—Manures

HOW TO KEEP LAND IN CONDITION.

Mr. Henry A. Howman, County Council Director of Agriculture and Dairy Instructor, then introduced the subject of "How to keep land in condition." Mr. Howman said his remarks were intended to stimulate thought and discussion, and did not pretend to be exhaustive of the subject. It was no doubt a matter for serious consideration how to meet the evil of what he thought he might call the decreasing fertility of land, though of course that was a difficult point to be certain about, viz., whether the land was really poorer in acquired fertility than it was, say, 50 years ago; but the stress and strain that was put upon farmers by the competition from abroad; by the increased cost of labour, not only in wages, but also in the decreased output of work, that labourers felt called upon to give for their daily wage than they did formerly, compelled attention to means by which larger crops should be grown, and the principles upon which that increase depended. It was necessary, in the first place, to divide the land for consideration into arable and pasture, because though the treatment in some details were identical, there must be a modification of some of them. Take drainage as the first essential, common to both, before any improvement could be made. No practical man would think it necessary to drain pasture land so thoroughly as they would do arable land, because the natural habit of grasses were to require more moisture for the production of leaves or herbage, than crops grown on arable land for seed purposes, such as corn crops. But large as was the quantity of moisture required by grass land, it was also clear that some outlet must be made for the circulation of the water, or else stagnation ensued, and a deterioration of the herbage consequent upon it took place. Water grasses and mosses took the place of the better kinds. The conditions for the proper and vigorous growth of grasses were exactly the same as those for growing all other kinds of plants. They required warmth and air and moisture. It did not necessarily follow that because drainage was necessary to ensure circulation of water, and thus the circulation of air and warmth were ensured at the same time, that drainage should be deep and costly, and in the class of land that these vales had, would be utterly thrown away; it was the surface drain-

age of pastures that should be attended to, and was, he thought he might say, absolutely neglected. Nowhere had he seen pasture land surface-gripped, as it ought to be at intervals—a plough run down the low places. Cutting a narrow trench, about two inches deep and three inches wide, and connecting these trenches with a main channel into the nearest ditch, would have a marked effect not only in improving the herbage, but also in hastening the early growth in the spring by making an outlet for the surface water, which now could not escape except by evaporation, and by that very process lowering the temperature of the grasses often to freezing point. In arable land the question of drainage was, of course, paramount, and no money was so well laid out as on this work, but in this, the modern idea of depth was opposed to that held when draining was first invented, and nothing less than from three to four feet was thought admissible. This erroneous depth was thought necessary, when it was supposed that plants required a considerable depth of soil to enable their roots to descend in search of food; but modern knowledge showed that roots of plants got their chief sustenance from the surface soil, and this probably without exception, so that drains from 2 1/2 to 3 feet deep answered all purposes. The next, and probably the most important item, was the accumulation in land of the fibrous roots of plants, commonly known under the name of turf. The high pressure of continuous cropping was no doubt responsible for the loss of one of the most valuable materials for the support of plant life. No land that was full of decaying vegetable matter could be considered to be in an exhausted state, and no land without it could bear maximum crops. He was now alluding to the natural decay of the roots of plants, but under the head of decaying vegetable matter, they must include farm-yard manure. The chief value of farmyard manure, and in a great many cases the only value was due to this decaying vegetable matter that it contained, and which acted mechanically in not only keeping the soil open, and allowing the air to permeate through it, but also, in decomposing, it raised the temperature of the soil, and thus materially assist in promoting the germination of the seed, and also encouraged the growth of the plant. If a sufficiency of manure could be made on a farm to dress the arable land every year, the question of the maintenance of fertility would be solved, but as a matter of fact, with few exceptions, it was quite impossible to do this, and so recourse must be had to other means whereby the "turf," or they might call it the "staple of fertility," was maintained. This was, of course, done by the system of cropping, when the temporary seeds took their place in the rotation, and the true principle seemed to lie in so prolonging the growth of these seeds that the maximum of root growth should be attained. The same end appeared to be attained by the growth of any green crop, and then either feeding it off or ploughing it under; but neither feeding off the crop nor ploughing it under would fully attain the end they had in view. The reason why the obtaining of turf in land was so all important was, first because of its mechanical action, similar to farmyard manure, in aiding in the circulation of air through the soil, and in increasing its temperature; but secondly, and of equal importance, was that in the decomposition of the vegetable matter.