

CARE OF GRASS LANDS.

By Andrew Elliot, Galt, Ont.

(Prepared for the Farmers' Institute System.)

Grass is undoubtedly the most important crop grown on the farm. Strange to say it is also the most neglected. Grass will grow everywhere. Let the land be idle, and even under the worst conditions grass of some kind will eventually cover the surface; but such grass is as a rule neither the best nor the most profitable. Too much of our grass lands are covered by grasses of this sort. Seeded down after the land had been impoverished by grain growing with a scant seeding of mixed grasses per acre, left to struggle for existence with grain, thistles, and other weeds, is it a wonder that a good catch is comparatively rare? The subsequent treatment is equally vicious. As soon as the grain is removed stock is turned on, the young plants are grazed close down to the crown to the serious hurt, if not to the entire destruction of the young plants; the roots are left so unprotected that they are liable to freeze out during the winter; and what plants survive the vicissitudes of winter and spring are so weakened that a poor crop of pasture or hay is the inevitable result. Then immediately after haying the same system of close pasturing is followed, and in time nothing but the hardest natural grasses remain.

If not already in good condition previous to seeding to grass, the land ought to be enriched and brought into the best condition mechanically, and liberal seeding be applied, the clovers mainly being relied upon. A mixture of say 10 pounds of common red, 3 pounds alsike and 5 pounds timothy, is none too much to sow. Six pounds of orchard grass may be added; in that case sow 6 pounds red clover, and 3 pounds timothy, and 3 pounds alsike. The grain ought to be sown thin in order to give the grass every chance. *The young grass should be pastured very little if at all after harvest*; the aim being to allow the young plants to obtain full possession of the soil and also to have the top to form a protection from the frost of the winter.

Grass intended for hay should on no account be pastured in the early spring, nor should stock be turned on the pasture until a good, strong growth is obtained. Neither should lands be stocked so heavily that the grass will be consumed, a certain amount of natural mulch from superfluous grass being very desirable. A top dressing of from 100 to 150 pounds of gypsum applied in the early spring will always be beneficial on meadows composed principally of clovers; in many cases it will double the crop. The objection will be put forward: Are we to let our cattle go without food in order to follow the above system? The question is, Shall they lack grass now or go without hay and pasture next year?

By following the plan outlined our lands will become richer as the years roll on and their stock-carrying capacity will be materially increased. By following the old hap-hazard style, our grass management fails to accomplish the end for which it is intended. It does not materially enrich the soil and is unsatisfactory in the extreme.

IMPORTANCE OF PLOUGHING THIS FALL.

By A. T. WIANCHIO, B.S.A., Sparrow Lake, Ont.

I would like to draw the attention of my fellow farmers to the fact that in doing our fall ploughing this year it is very important that we consider the amount of rain which fell during the past summer. We must remember that rain impacts the soil and makes it impervious to the atmosphere, thereby excluding the oxygen, which is so necessary in making available new plant food and in furthering disintegration. Owing to the excessive amount of rain during the past season the soil is unusually compact this fall, and if the ploughing be deferred until next spring the result will be a considerably smaller crop than we might reasonably expect, because the beneficial pulverizing influences have been excluded during the time when they should do their work.

There are a number of reasons why we do most of our ploughing in the autumn for the following year's crop. Many farmers will tell you that they plough in the fall in order to save the time in the spring when they want to get their seeds into the ground at the earliest possible moment. This is one reason, but by no means the most important one. The real benefit derived from fall ploughing lies in the fact that by leaving a field in the rough furrow until the following spring it is exposed to the influence of the atmosphere and the winter's frosts. These two agents have no small effect in making soils more productive.

Nearly all soils contain an abundance of the elements necessary for plant growth, but the trouble is that these elements are largely in an unavailable form. They must first be converted into available forms before they can be taken up by plants as food. This process is going on continually in nature by means of air, water, and frost, but in many cases too slowly. It, therefore, behooves us to aid nature all we possibly can in converting the unavailable into available forms of plant food. One good way to do this is by fall ploughing. Our fields are much impacted by the excessive rains. Therefore if we plough them now in narrow, well set-up furrows, we loosen the soil and expose a large amount of surface to the action of the atmosphere and the coming winter's frosts. The air can then circulate freely among the particles of soil, thus allowing the oxygen to do its work in converting the elements into suitable forms for plant food. Without oxygen no soil can be productive.

In an open winter, such as the past one, the action of frost is especially beneficial. The continual freezing and thawing breaks up the soil, furthers disintegration, and leaves the land in excellent tilth for harrowing and seeding in the spring. This action of frost is of most importance in heavy clay soils. An excellent plan for treating heavy clays is to ridge up the fall plowed fields before winter sets in. This may be accomplished by always plowing two furrows together in the manner usually adopted in planting a field of potatoes. It can readily be seen that by this means we are enabled to expose the largest possible amount

of surface to the influences of air and frost. We have done this at home with the greatest success. Heavy clays that were always forming into clods were made nice and mellow. The increase in the crop yield will more than repay the extra time and trouble.

I have not treated this subject exhaustively, my object being merely to draw the attention of my fellow farmers to a few important facts, and am satisfied with the hope that what has been said may lead many to give the matter their careful consideration.

THE LATE JAS. S. SMITH.

It is our painful duty to record the death of James S. Smith, of Maple Lodge. Mr. Smith was born in Cathness, Scotland, in 1816, and had charge of his father's farm for some years before coming to Canada in 1842. He settled in the township of Markham, York county, and some forty-one years ago moved to the township of McGillivray, county of Middlesex. Mr. Smith was always an ardent champion of free education, and fought for it with marked success. In 1860 he organized the McGillivray Agricultural Society, and held the office of president for sixteen years. In 1863 he was elected reeve of the township, and held the office until 1866. In politics, Mr. Smith was a staunch Liberal, and represented North Middlesex in the Ontario Legislature for two parliaments—from Confederation till 1875—where he was especially valued



as a member of House committees. Until his death he was a member of the Advisory Board of the Ontario Agricultural College. It is, however, as a successful farmer and skillful breeder of Leicester sheep and Shorthorn cattle that Mr. Smith was best known to the farmers of Canada. He was always at home among Leicester sheep, having lived on his father's farm in Scotland. The foundation from which the present flock has been raised was made by purchases of imported sheep in 1854. Importation and purchases were made from time to time of such animals as most nearly conformed to his ideal type of a Leicester. Mr. Smith aimed to establish in his flock, among other things, extra quality, uniformity of type, and constitutional vigor. The winnings of his flock in the show ring year after year are sufficient evidence that no small degree of success attended his efforts. The foundation of his herd of Shorthorns was laid at about the same time as his flock of sheep by the purchase of stock from the best milking strains of the day. In his breeding, Mr. Smith strove to successfully retain and improve the milking qualities of his herd, and at the same time, to build up their breeding qualities. In this, too, he has been eminently successful. The good success that attended his public sales of Shorthorns was largely due to the honorable, upright manner in which he always endeavored to conduct his business along with having desirable stock to offer. He was of a kindly disposition, and his many friends will not soon forget his courteous, friendly, and honest expressions of opinion, his warm sympathy with any one in distress, his appreciation and struggle for truth and right, and his hearty satisfaction in

a friend's success. He was a staunch Presbyterian, in which Church he was for many years a devoted member and elder, and an unceasing worker. He will be missed by a very large circle of friends and leaves an estimable wife and family—one son and four daughters—to mourn his loss. The farm and stock business will still be continued by his son, Mr. A. W. Smith, who has borne the responsibility during his father's illness.

THE MILK TEST AT THE CENTRAL CANADA EXHIBITION.

Representatives of only two herds were entered for the milk test. Messrs. Gilroy & Son, of Glen Buell, made three entries, and G. W. Clemons, St. George, made two entries. Messrs. Gilroy's cows were on the ground some days before those they were competing against, and thus were in good trim. Mr. Clemons' cattle did not get in until Sunday morning from London, and the test came on Wednesday. Mr. J. A. Rudwick, superintendent of the Kingston Dairy School, had charge of the test. The results are as follows:

Name of Cow.	Owner.	Age.	Date of Calving.	Per cent.			Total Solids.
				Lbs. of milk.	Lbs. of fat.	of fat.	
1. Carmen Sylva	C. J. Gilroy & Son	6 Yrs.	Aug. 20th	67.25	1.88	2.8	7.59
2. Cornelia Artis	G. W. Clemons	4 Yrs.	July 29th	48.25	1.44	3.0	5.30
3. Lady Teakes	C. J. Gilroy & Son	3 Yrs.	Aug. 23th	45.00	1.35	3.0	4.95
4. Eric Belle	C. J. Gilroy & Son	8 Yrs.	April 1st	41.25	1.29	3.1	4.48
5. Queen De Koll end	G. W. Clemons	2 Yrs.	Aug. 1st	40.70	1.09	2.7	4.19

BOOKS AND BULLETINS.

Nearly all "Bulletins" mentioned under this heading can be obtained free on application to the Directors of the respective Stations or Colleges. In cases of doubt as to address write to FARMING.

The Kent or Romney Marsh Flock Book. Volume 3. Rams, Nos. 2577 to 4416. Ewes, Nos. 3 to 8. Flocks, Nos. 1 to 49. From W. W. Chapman, Room 132 Fitzalan House, Arundel street, Strand, London, W.C.

Milk: Composition, nature, hygienic, and economic methods of Handling, by A. J. McClatchie, Bacteriologist and Botanist. From the Agricultural Experiment Station, South California.

Journal of the Royal Agricultural Society of England. Third series. Volume 8. This volume contains: The Manchester Meeting, 1897. Farm Implements exhibited at Manchester, 1897, with many illustrations. The Value of Plant Roots as Tillers of the Soil. Recent Experiments in Denitrification. Bacteria in the Dairy. Sheep Worrying, by S. B. L. Druce. Also many other articles and illustrations. Price 3s. 6d.