

A Good Barn in a Wheat Section.

It is encouraging to see such stock barns as shown in the accompanying cut, and to read letters like that of Mr. S. Martin, living, as he does, right in the center of one of the great wheat sections. His finding that "I can keep more stock every year and grow as much wheat as I ever did" is most important, and should be seriously pondered over by every farmer whose land is "too good for a stock farm," for as surely as the practice of growing all wheat and returning nothing to the soil is continued in, so surely will failure and disaster come.

The necessity of returning vegetable fiber to the soil is yearly becoming more apparent, and this can be done only by applying manure or growing grass. The latter seems the most practical way of supplying the soil with root fiber to prevent drifting and to get the soil back into the best mechanical condition. Once a man has grass land, stock-raising will follow as a natural consequence. The manure can be utilized and a regular rotation adopted. In the illustration is shown the engine house, for the protection of the 25 h. p. traction engine, which is utilized, when not threshing, for chopping grain and cutting straw and oat sheaves. For the latter purpose a 200-foot rope connects over a pulley with the large-sized cyclone straw cutter in the barn loft, the engine house being over 90 ft. from the barn. The barn itself is 100x50 ft., with 16-ft. posts, double boarded throughout, and all studs, rafters, etc., are 2x6 stuff, there being 60,000 feet of lumber and 52,000 shingles used in the construction of the barn. For the horse stable 32x32 ft. is cut off at each end of main barn, with close-board partition, a 16-ft. passageway through the center, with a roller door dividing horse stable from cattle stable. This doorway enables a team to drive right through when drawing out manure. The stable holds 14 horses. The floor is of cement in the horse stable, but no flooring underneath cattle—being well bedded, the liquid is all absorbed in manure. A 35-barrel water tank stands in the center of barn. Excellent and abundant water is obtained at a depth of 23 feet, a sand-point being forced down to the water, and it is drawn up by an 8-ft. wind-mill, which pumps for all the stock and the engine. A carrier track extends full length of the barn, slings being used for unloading straw, sheaves and wild hay, with perfect satisfaction. As to his feeding operations, Mr. Martin speaks for himself in the following letter:

The main part of the barn is 32x100 ft., with lean-to 18 ft., which makes the building 100x50 ft. One end is the horse stable, 32x32 ft., leaving balance of main part 32x68 ft., in which I feed 25 to 30 steers (dehorned), loose, and 20 hogs running among steers. The horse stable is cleaned out every day, and all manure and bedding scattered in where the steers and hogs run. This is all the bedding they get, and they keep clean. The hogs have a self-feeder; are fed dry chop and supplied with water in a trough. I have never had hogs do as well as those I handled the past winter in this way, as they get plenty of exercise, and it was dry and warm. They work over all the manure. Stock handled in this way make the best of manure, and it can be handled at the least cost. Near spring, when it gets too high for the mangers, we drive wagon right through barn, haul direct to fields and spread. The lean-to holds about 60 calves, all loose, with pen in one corner for newly-calved ones. A few hogs are let run in here to work over manure. All chop fed to cattle is mixed with cut straw or oat sheaves, as I find that when fed without cut feed some eat faster than others, and scour. There are 25 windows in this barn: large ones to the south, east and west, and small ones to the north. I am a strong believer in sunlight, and have not

is that they do far better loose than tied, keep cleaner and stand shipping better. Also, buildings can be put up for a good deal less money, and the stock can be attended to a lot easier. I live in a good wheat district, where land is valuable, and find that by fencing my land, rotation of grass, growing rape on my fallow, also oats and corn for fall pasturing, instead of cattle losing on the bare fall pasture what they gain in summer, I have them go into winter quarters fat, and by using all my straw and returning manure to the land, I can keep more stock every year and grow as much wheat as I ever did.

S. MARTIN.
Cornwallis Municipality, Man.

Does Wheat Turn to Chess?

"Wheat ground should be well drained to let water off. In wet ground the expansion in freezing will heave and thus break the roots and the wheat will turn to chess or cheat. (Cheat should be the proper name, as it cheats the farmer out of a crop; even the straw, if let get ripe, is worthless.) Twenty-six years ago I could not have been made to believe that wheat would or could be made to turn to cheat. So I sent to Iowa for ten bushels of clean wheat to sow. Not a grain of cheat could be found in the ten bushels. I sowed it on new land where never a crop had been; the land running from upland to second bottom and to very wet bottom and by stable lot where hogs and poultry run. The result was: On the upland about one per cent. cheat, on the second bottom about two per cent., on the low, wet bottom about 95 per cent. cheat. In fact, the wet bottom looked like it was all cheat, and that by the stable lot that was eaten and pastured when in the boot by pigs and poultry, about ninety per cent. was cheat. Sow cheat and it will grow and make cheat. Some claim that wheat won't turn to cheat. If cheat is not from wheat and a natural production of the soil, why don't it show itself in rye, barley, etc., but only in winter wheat? Let any one that don't believe that wheat will turn to cheat plant say fifty grains of wheat in a row, and in spring when in the boot before it joints, take a knife with a long blade and cut the center root and about half the other roots. This



A GOOD BARN IN A WHEAT SECTION. S. MARTIN, ROUNTHWAITE, MAN.

can be done quickly. Run the blade of the knife about two inches under the crown, cut over half the roots."—Jacob Faith, in *St. Louis Journal of Agriculture*.

[What say readers of the FARMER'S ADVOCATE to the above? It is an old query, does wheat turn to chess? But perhaps someone has some new facts that will shed light on the subject. What say the experimentalists?]

White vs. Black Oats.

There is a difference of opinion as to the comparative values of black and white oats for horse-feeding purposes. The former is somewhat more thick-skinned, and bulk for bulk it does not contain as much nutriment as the latter. In practice, however, the difference between them for feeding purposes is not found to be worth taking into account. For milling purposes, however, the white oats, with its thinner husk and proportionately larger kernel, is the more valuable, and it consequently commands a somewhat higher price than the black variety.

Can't Afford to Do Without It.

To the Editor FARMER'S ADVOCATE:

SIR,—We are pleased to add our testimony to the merits of the FARMER'S ADVOCATE. It is a welcome visitor to our home, and should be to the home of every farmer in Canada. For a man to say he cannot afford it, is a great mistake. He cannot afford to be without it. He will find something in it during the year that will repay him many times for his outlay, besides furnishing intelligent, pure reading for his household. B. H. BULL & SON.
Peel Co., Ont.

The study of agriculture will be introduced into the country schools in Illinois in the fall, and an effort will be made to have the city schools also adopt it. The first list of studies are of the most primary character. None is more difficult than the requirement of the scholar to tell how many rows of corn there are on a cob and what color the cob of an ear of white corn is?

Filling the Silo.

Stage of Maturity.—The most exact knowledge we now have upon this subject indicates that generally crops will make the best silage when they are cut as near full maturity as possible and yet to



FIRST-PRIZE MERINO EWE OVER EIGHTEEN MONTHS OLD.

Paris Exposition, 1900.

OWNED BY M. LESAGE.

have their tissues filled with sap. When corn is put into the silo in a very succulent state, it is filled with a large per cent. of compounds which are easily decomposed, and this not only makes the unavoidable losses high, but it is likely to cause unpleasant odors and less palatable feed. Besides, there has not yet been developed enough of the woody tissues in the plant to enable the juices to be retained under the pressure of the silage, and in early silo practice provision was often made for drainage on this account. Corn is in the best stage for the silo when it is in the best stage for cutting

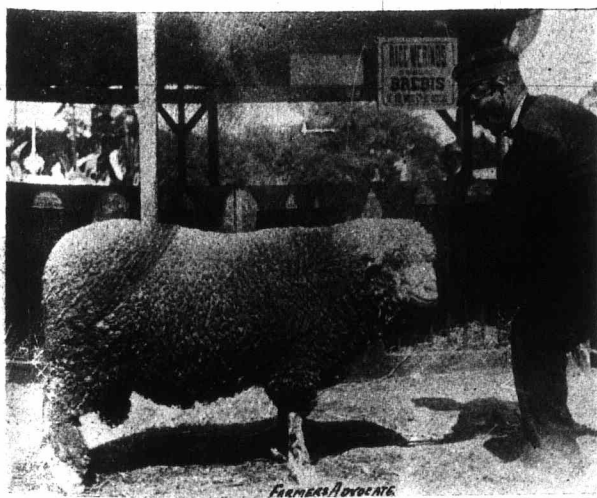
and putting in the shock; that is, when the ears are fully matured, but the stalks, leaves and husks are yet green. Clover for the silo should be a little more mature than for making the best hay; that is, the bloom should have well begun to turn brown. In practice it will, of course, be necessary often to put some of the corn into the silo a little too early for the best results, in order that the last may not be too dry; but judgment in planting at different times, and in cutting that which on account of differences in soil or variety has matured first, will usually give two or three weeks for the filling season, if that time is needed.

Tramping.—Attention has not been sufficiently called to the importance of thoroughly compacting silage at the time of filling the silo. The immediate and continuous thorough tramping not only enables a much larger amount of silage to be put into the silo, but it expels at once a large volume of air which, if allowed to remain, prolongs the changes which occur. General tramping of the whole surface is important, but much the larger amount of labor should be expended around the sides, because the lateral pressure tends to develop friction of the silage against the walls, which prevents its settling, and if it does not settle here and become compact the tendency of air to enter through defects in the wall is much greater. The importance of tramping is greater the more shallow the silo and the more porous the walls. In the deeper silos, if help is scarce, one can better afford to dispense with a man in the silo; but the upper ten or fifteen feet of silage in all silos should be very thoroughly tramped, and the feed saved by it will abundantly pay for the labor of two faithful men who can be depended upon to work.

In deep silos so much settling occurs, especially where filling has been rapid, that the dragging of the silage on the walls so much loosens it there that air is liable to penetrate from the top to considerable depths and to more easily enter through defective walls. It is because of this fact that slow filling is better, and that silage so often spoils badly around the sides at the top in so many cases.

To overcome these conditions, the whole surface of the silage should be tramped once a day for three or four days after filling has been completed. One should begin at the walls and go around the edge with short steps and the feet close together, springing the full weight suddenly upon the feet to increase the pressure, and then by slow degrees work toward the center until the whole surface has been covered. Whoever does this will be surprised to find how loose the silage appears to have become next to the wall and how much it may thus be made to settle.—Summarized from Bulletin No. 83, Wisconsin Exptl Station.

The weather in most sections of Ontario during the last half of August has been especially favorable for preparing the land for the sowing of fall wheat, frequent and copious showers of rain having fallen.



SECOND-PRIZE HORNLESS MERINO RAM.

Paris Exposition, 1900.

OWNED BY M. PARENT.

had any lice on cattle in this barn, and have not put any preventive on them. Breeding cattle are kept loose in another barn, nothing being tied up but the milk cows. My experience in feeding cattle

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