

this industry, by some such plan as here outlined, freeing his stock entirely from the old-time methods of pigsty or barn-cellar growing, and advertising a healthy product made only on forage crops, in open pastures with home-grown grain, in order to insure a permanent market at advanced prices. The absolute purity and cleanliness of the product, and freedom from all possible taint from impure surroundings and stale swill feed, will attract buyers. It will be understood here as everywhere that an abundance of fresh water must be available at all times, and if possible it is best to equip a field in close proximity to a brook or within easy access of a water supply. In this way the labor item during the growing season is practically eliminated."

THE FARM.

The Use of Lime.

The results of co-operative alfalfa tests indicate that on many Iowa soils the use of lime on alfalfa fields is to be recommended, as its application has in many cases been very beneficial. At any rate no harm can come from an application of from 1,000 to 2,500 pounds of lime per acre and especially if this be in the form of finely ground limestone or limestone screenings, which is decidedly preferable to quick lime.

In a number of co-operative tests the applica-

tion of lime was absolutely essential before alfalfa could be grown successfully, indicating that the soil was strongly acid. In other cases, while a satisfactory growth was secured without the use of lime, its use gave a more vigorous growth and better color.

Alfalfa requires for its best growth a large amount of calcium, which is the active principle of lime. Also, alfalfa cannot grow and thrive in soils which are at all acid, owing to the fact that the nitrogen-gathering bacteria which live upon its roots, and upon which in turn the alfalfa plant depends most largely for its supply of nitrogen, cannot live, thrive and multiply in an acid soil.

SILO FILLING — SOME FIGURES FROM WELDWOOD.

On the modern dairy farms of Ontario and Quebec silo-filling is the problem of the fall. This year it will be complicated by grain threshing, with which in many districts it will coincide. Hard work it is, but pleasant, as the rank heavily-eared stalks—perhaps they won't be so heavy this year—are hauled load after load to the ensilage cutter, chopped to inch or three-quarter inch lengths and blown into the cavernous mows of thirty-five or forty-foot silos whose capacity to receive and preserve this cheapest of all good cattle foods is fairly incredible to one who has not seen silos filled. Corn, we have just remarked, is our cheapest good cattle food, and the silo is our most economical as well as our best means of storage. It is most economical in respect both of building and labor. True, it makes a busy September, but once the silo is filled, one has his corn-cutting, shocking, husking, grinding, stalk-cutting and mowing away all completed for the year, so far at least as the ensiled acreage is concerned. Much is accomplished in a short space of time, and the feed is ready to throw out and place before the cattle with a minimum of labor. A great wealth of satisfaction comes out of the silo all winter long. But let us to the practical.

WHEN TO FILL.

Accumulating experience demonstrates the folly of worrying over-much about freezing. If cut and ensiled soon enough to prevent much waste of leaves, corn will be little the worse for an ordinary white frost. If it gets too dry water may be added. Comparative maturity is very desirable. For best results in feeding either beef or dairy cattle, but especially the former, the corn should be cut when the grain reaches the glazing or dent stage, when the husks and lower leaves have begun to turn brown.

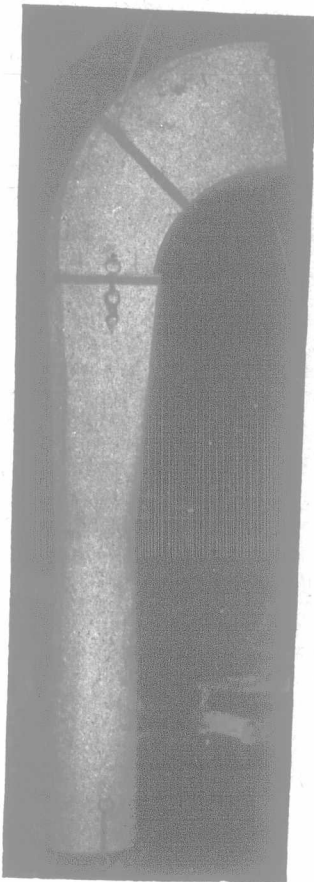
CUTTING.

The corn may be cut by hand with hoe or sickle or by horse power with a corn binder or sled. Hand cutting is better adapted to hill corn, the binder or sled to drills. Where help is available at two dollars a day or less there is much in favor of cutting with heavy-bladed short-handled hoes. With one of these a good man can cut two acres of any straight-standing hill corn in a ten-hour day and lay it in neat loose bunches. Last year at Weldwood our corn had been badly beaten down by an August storm, yet sixteen acres were cut in about 85 hours at a cost of very little over a dollar an acre. And after the field was cleared its close stubble was the admiration of all who saw it. It is impossible to cut quite so close with the sickle or corn binder, though on smooth soil the latter can get down fairly well. The binder has the great advantage of leaving the corn bound and therefore in condition to handle quickly and feed freely through the mouth of the cutting box. At least twenty-five per cent. more bound than unbound corn can be run through the box in a day, given the men and teams to put it there. This is particularly true if the stalks be crooked. Whether the advantage here compensates for the greater cost per acre of cutting, the undesirability of having twine in the silage and the loss of stalk left on the field, each man must decide for himself. Where help to cut by hand cannot be had at all, the question, of course, ceases to be debatable. While it is desirable to cut within two or three days of filling this is not necessary. Some of the corn may be cut a week or two ahead if need be and mixed in filling with the fresh-cut corn, making excellent silage. This is particularly true of what goes into the bottom of the silo, though last year we refilled our silo with shocked and ripe green corn load about and had good results. Sand on the corn caused by rain while lying on the ground is undesirable, but a little clay will never be noticed when the silage comes out.

PREPARATIONS FOR FILLING.

Plenty of fuel and water should be provided in good time. If water can be run directly to the

engine by means of hose, pipes or wooden troughs it will often be economy to supply it that way. Before commencing to fill, arrange if possible by means of a spray pump or otherwise to wet the walls inside, especially if the silo is cement. Otherwise juice may be absorbed from the



Pipe for Distributing Cut Corn in Silo.

corn by the cement wall drying it out and causing a deterioration of the outer layer.

FILLING DAY—MEN AND TEAMS NEEDED.

By exchange of labor or by hiring one must arrange for an ample gang. It is poor economy

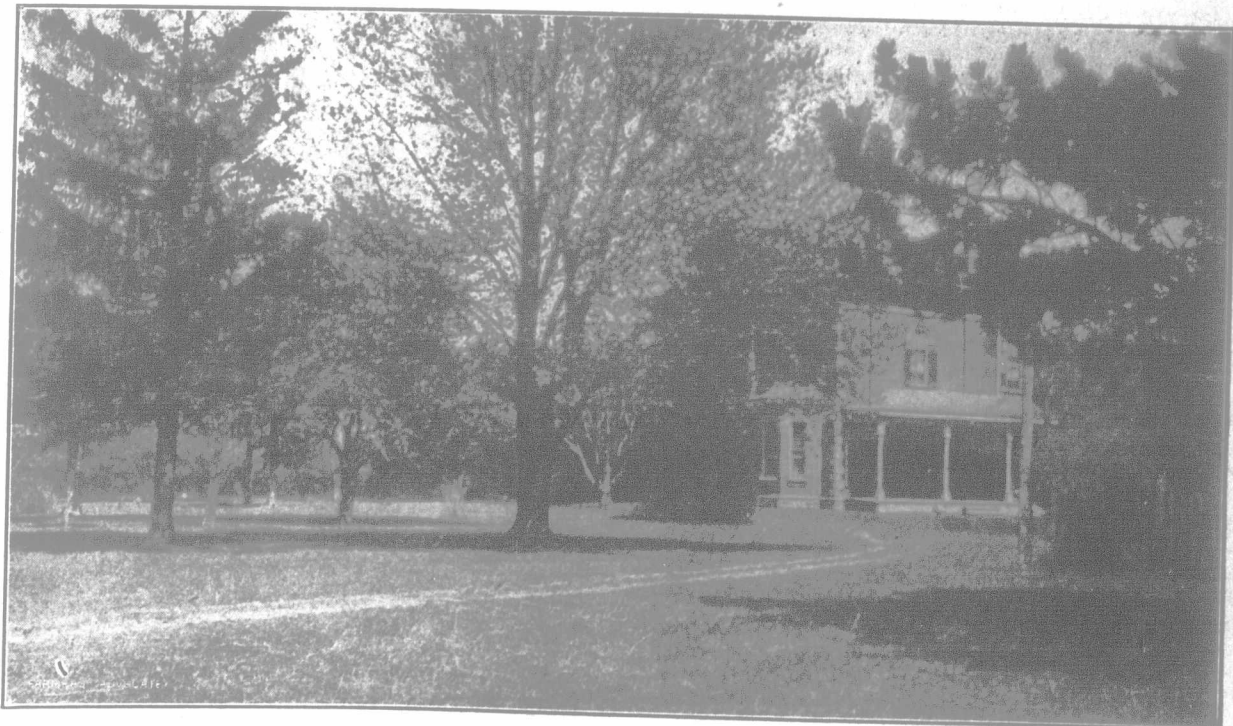
to keep an outfit running below capacity at a dollar an hour. With an average haul of say three-eighths or even half a mile four good teams will usually be sufficient for an ordinary outfit. The gang in addition to engineer and feeder should include about eleven or twelve men, distributed as follows: Four teamsters, one helping the teamsters unload, four or five men in the field loading and two in the silo. It is well for the proprietor to keep himself free to over-see things and lend a hand wherever it may be needed most. Towards the last he may dispose himself best as a third man in the silo. The men in the field may cut with hoes when for any reason operations are arrested. While changing men round judiciously so as to ease those in hard places, it is important to preserve system and keep a sharp oversight of everything. Tact and example are usually all that is called for, but sometimes drive is necessary as well. Low-wheeled wagons or trucks make loading easy. Where the corn is laid horizontally on the rack the ends should be filled first and centre last. A year ago a correspondent suggested standing tied sheaves upright in the rack, claiming it enabled him to draw big loads and also to unload easily. The idea looks good.

FAST OR SLOW FILLING.

Questions have been raised by scientists whether the best silage is made by filling fast or slow. As a rule economy demands rapid filling and A1 silage can be made that way. We have never seen silage better than we had last year and it was made on the principle of getting the corn packed into the silo as tightly and rapidly as possible. The last foot of it is being fed out as we write and is in prime condition, a little gummy with accumulated juice, but fragrant, appetizing and nutritious, without any trace of that swilly condition sometimes found in the bottom of deep silos. Perhaps the drain may have had something to do with this.

DISTRIBUTING AND TRAMPING THE CORN.

One of the important points of ensilage practice is the distributing and tramping of the cut corn. In this connection we might mention the matter of length. We prefer three-quarters of an inch, though an inch is not bad. The finer the cut the tighter the pack, but of course the slower the filling. There should never be fewer than two men in the silo and unless some distributing device is used there should be three. To distri-



Sprucedale Farm.

Home of A. Watson & Sons, on Talbot Road, five miles west of St. Thomas, Ont.