rod was brought in as straight a course to the ground as possible. The points are on the ridge of the barn, 20 feet apart and 10 feet high, sprangled out at the top and stayed with light cedar poles. Each point (except one spliced to the rod leading from another point) has separate ground connection. Mr. Baty and man made and put up in less than a day and a half, 240 feet of rod. About 10 ounces of wire per foot of cable were used, at a cost of less than two cents per foot. Several of the best authorities have pronounced this rod correct in principle and efficient. By several, however, the cedar blocks were deemed unnecessary, as the lightning would not likely leave as good a conductor as the rod and take to a wooden wall. We mentioned this rod to Prof. Reynolds, and he pronounced it a good one, more effectual than the ordinary lightning rod. In an interview of recent date, Mr. Baty intimated that if constructing another rod he would use No. 11, instead of No. 8, wire, but would add sufficient strands to make ten ounces per foot. The smaller wire would be more easily worked, and the additional number used would tend to increase the conductivity of the rod. To keep the wire from touching the roof, he would place a cork under each staple before being driven.—Ed. F. A.]

Mustard Spraying.

Prof. M. W. Doherty, of the Ontario Agricultural College, has lately been making a tour through Western Ontario for the purpose of demonstrating that it is possible and practical to destroy wild mustard, by spraying with copper sulphate, without injuring farm crops. On Thursday, June 12th, a representative of the "Farmer's Advocate" had the pleasure of witnessing the operation on the farm of Mr. P. H. Lawson, Westminster township. Ten pounds copper sulphate (bluestone) were placed in a sack and suspended in a large pailful of warm water to dissolve. This was accomplished in about fifteen minutes, after which the solution was placed in a barrel, to which the spray pump was attached, and the whole made up to 45 gallons, an amount sufficient for one acre.

During the afternoon only about two acres were sprayed, it being the Professor's intention to have everything in readiness for the public demonstration, as advertised, for the following day. Unfortunately, however, rain that evening prevented these plans from being carried out. Later, Mr. Lawson continued the spraying according to directions until a field of twelve acres had been treated. A visit to this farm on July 5th showed the mustard practically all gone; only a few leafless stalks were to be seen, with pods half mature. These, no doubt, would have been completely killed had the spraying been done from one to two weeks earlier. The oats, in which the mustard grew quite thickly, were somewhat singed on the top leaves by the solution when spraying took place, but at our last examination —on July 5th—all signs of injury had disappeared. In an adjacent untreated field the yellow blossoms were quite thick and visible at half a mile away, but in the field treated no yellow blossoms were visible.

As a result of our close observation of this work, as well as reliable reports which have been received from other sources, we have no hesitation in recommending Prof. Doherty's method for the destruction of this most pernicious weed. A suitable spraying outfit ready to attach to a cart or wagon may be had for less than twenty dollars. The cost of copper sulphate will not exceed eighty cents per acre, and if the spraying be carefully carried out for four years, there is no doubt but that the weed will have become thin enough to be pulled by hand. The saving in moisture and plant food during that time will in itself be sufficient to pay the actual cost, and in the end the land will be greatly increased in value.

Killing Woodchucks.

Every year considerable damage is done to various farm crops by the woodchuck, or groundhog. Various methods of exterminating this destructive little animal have been devised, but so far none have given as good results as bisulphide of carbon, when carefully used. Prof. Weed, of New Hampshire Experiment Station, in Bulletin No. 91, gives the results of a series of experiments with this substance as a woodchuck killer. Bisulphide of carbon is an inflammable liquid, which may be obtained at any drug store. Upon exposure to air it volatilizes into a vapor that is very destructive to animal life. This vapor is more than twice as heavy as air, so that in a woodchuck burrow it will follow along the hole until it reaches the bottom, crowding the air above it to the top. As the animal is likely to be in the lower part of the burrow, it is almost certain to inhale the poisonous vapor and be killed. To those who use it, however, it must be remembered that it is poisonous and highly explosive when mixed with air. It must be kept away from children and from fire of any kind, but when carefully used out of doors there is little danger. A trial will repay those interested.

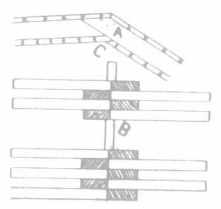
Twelve-Sided Wooden Silo.

To the Editor "Farmer's Advocate":

Sir,—Having noticed in the "Farmer's Advocate" of June 2nd an article on wooden-hooped silos, I herewith give a plan of one which has been used extensively in this locality, and is giving entire satisfaction. They are twelve-sided, and the frame is made of 2x4-inch scantling, twelve feet long, on the inside of which matched and planed inch lumber is used for sheeting.

The outside may be covered with matched and planed or rough lumber or left bare, according to the amount of money to be expended. If the outside be boarded and tar paper be used under both inside and outside sheeting, the air will be kept out as well as the frost to a large extent.

In commencing to build, cut a twelve-foot scantling in three equal pieces, with eight-inch bevel, and nail with 4½-inch cut nails, as seen at A. Twelve pieces, if cut and nailed in this manner, will make a hoop about twelve feet in diameter. Place this frame on a solid foundation of stone or concrete, and continue cutting and laying scantling in the manner as seen at B, leaving two-inch space between each tier, until a height of six feet has been reached. Then studs six inches long should be used between each two rows of scantling, placing one under each corner, as



SCANTLING FRAME.

seen at B above. After building in this way for another six feet, the length of the corner studs may be increased to twelve inches, as the pressure outward will be much less at the top of the silo than at the bottom. These studs in every case will require to be well toe-nailed with three-inch nails. In putting on the inside sheeting, it should be allowed to lap in the corner, as seen at C, to prevent the entrance of air, and if a coat of coal tar or paint be applied, the durability of the silo will be greatly increased. Where this silo is built inside a barn, no roof will be required, but when it is to be constructed outside, one will be necessary. It may be made with twelve rafters, the foot of each nailed where the scantling join, and the upper end of all fastened to a piece of heavy scantling, which may be shaped on top as a spire. Boards and shingles should be added to make the roof complete. For the admission of the silage from the rakes or blower, a Gothic window should be arranged in the roof. At each side, also, of the holes where the fodder is to be thrown out, scantling should be firmly spiked two feet apart. If brackets be nailed across these upright scantling, they may be used as a ladder, and the silo will be strengthened at this its weakest point. Silos built in this way are not affected in the least by the hot sun or strong winds as stave silos are. SUBSCRIBER.

York Co., Ont.

Mr. Glendinning's Method Endorsed.

To the Editor "Farmer's Advocate":

Sir,—Having read with interest an article by Mr. Glendinning on the curing of green clover, we accept your invitation to state briefly our experience with the system outlined by that gentleman. Last year was our first trial with this method, and although only about twenty-five tons of our hay was cured in this way, yet the results have been so satisfactory that we intend handling it in that manner this season.

Most of the clover was cut when the first blossoms were just beginning to turn brown, but we believe that it would be an improvement to cut earlier, owing to the large development of fiber in the later stages. The cutting was done in the forenoon. While this was going on, the cocks put up the previous day were shaken out slightly and exposed to the sun for about an hour before being hauled to the barn. The hay cut in the forenoon was cocked up the same day after drawing in was completed. No hay was handled when the dew was on.

The hay was stored in the mow of a bank barn, on a floor of one ply of inch lumber, over an open shed, being put in as tightly as possible. No preservative was used. The siding of the barn touched the hay on one side only, leaving three sides free until threshing time. Any moisture foreign to the plant itself will cause mustiness if not thoroughly removed before storing the hay in the barn. We have no hesitation in recommending the system as a successful method of handling green clover. JOHN C. READEY.

Lanark Co., Ont.

DAIRY.

Keeping Milk in Warm Weather.

The practice of putting in a supply of ice during the winter has in many instances solved the problem of keeping milk sweet during the summer months. However, where there is one ice house to be found on small dairy farms, we venture to assert that ten of these farms could be found where such an improvement is absent. In view of this, the perplexing problem of keeping milk during the hot weather annually presents itself. The first step in the process of preserving milk in a sweet condition is that of keeping things clean at time of milking. This refers not only to cleanliness of the milker, but also to that of the utensils as well as surroundings at milking time. Milk when drawn from the animal is in a perfect condition for the absorption of odors from the surroundings. At this temperature many organisms when once present in milk multiply at an exceedingly rapid rate, and it is impossible, no matter how cleanly every stage of the milking may be, to prevent the entrance of some of these organisms that cause fermentation or souring. The only thing that can be done, apart from being scrupulously clean in every detail, is to cool the milk as rapidly as possible after it is drawn. This does not mean that the milk should be left in the stable, even should it be cool there, but rather that it be immediately removed to clean, fresh quarters, and there subjected to rapid cooling by surrounding it with water. So much the better if it can be aerated before setting. If an ice supply is not available, ordinary spring or pump water will do exceedingly well. This is usually drawn at a temperature of from 50 to 60 degrees, and it has been ascertained that when milk is suddenly reduced to this temperature, organisms are of exceedingly slow growth. Not only does this check souring or fermentation, but it causes the rapid rise of butter-fat or cream, which in most cases is the object sought. In addition to this, however, it is often necessary to keep the milk sweet during a period of twenty-four, or possibly forty-eight, hours for the purpose of utilizing it as a food for calves. In view of this, the practice that we have recommended is an exceedingly good one in the absence of such dairy machinery as the hand separator.—Homestead.

Delivering Butter to Refrigerator Cars.

The Refrigerator Car Inspector at Montreal, in the employ of the Dominion Department of Agriculture, reports that there is a great variation in the condition and temperature of different lots of butter arriving at Montreal in the same car. He finds some lots of butter quite soft, having a temperature as high as 64 degrees, while other lots are firm and cold and as low as 46 degrees. Mr. J. A. Ruddick, Chief of Dairy Division, Ottawa, wishes to draw the attention of creamery managers to this matter, and points out that the refrigerator car is only calculated to keep the butter cold and firm when it is delivered in that condition, and those who are responsible should see that the butter is delivered to the cars with the least possible exposure to heat. The refrigerator cars run on regular trains, and are timed to arrive at a certain hour. The train may be late, but never ahead of time. Butter should not be delivered to the station before the trains are due to arrive. Waterproof covers should be provided for wagons to protect the butter from the heat of the sun. If the butter is delivered to the cars in a soft condition, it will arrive that way in Montreal, and will deteriorate in quality very rapidly on account of the high temperature. It is quite evident, also, that many of the creameries are not yet provided with proper cold-storage accommodation. Any creamery cold-storage in which the temperature is not kept down to 36 to 38 degrees is either not properly constructed or badly managed. Creamery proprietors should make a point of looking after this matter very closely. The best way to get the average temperature of a creamery cold-storage is to take the actual temperature of the butter after it has been in the refrigerator two or three days.

Moisture in Butter.

In view of the recent enactment in Great Britain, that butter to be accounted genuine must not contain more than 16 per cent. of water, it has been deemed advisable by the Canadian Department of Agriculture to ascertain the average moisture-content of Canadian creamery butter. To this end samples of butter as packed for export are being collected for analysis. Two samples, taken a week apart, are being sent to Ottawa from each creamery, the first to be held until the second is ready, and both forwarded together. A memorandum must accompany each sample, giving the following amongst other details: Name of creamery, whether gathered cream or separator system, name and address of buttermaker, date of churning, style of churn, temperature at various stages, etc. The analysis will be made by Mr. Frank T. Shutt, Chemist at the Experimental Farm, Ottawa.