

as a feed depends upon the amount of dry matter contained and the degree to which the air is excluded from the silo. In this respect moisture is very important, since it is necessary, even when the walls are tight and when the silage is tramped thoroughly, to have a sufficient amount of moisture present to fill up the small spaces so as to admit the minimum amount of air. Failure to exclude the air is the principle cause of moldy silage since air must be present before fungi can develop. After six years' investigation at the Connecticut Experiment Station it was concluded that silage fermentation is similar to the fermentation that occurs in milk. Silage is really pickled corn, and it will keep as long as the bacteria which destroy the acids are kept from it. Molds are acid-destroying organisms, and when these are able to gain entrance to the silage they will destroy the acids of the silage, and it will spoil and decay. Molds require air, however, and thus the dairyman is provided with a method of attack against their presence. The fact that acids act as a preservative for silage is also the chief reason why there should be plenty of moisture incorporated in the silage. Moisture is necessary to proper fermentation in the silo, and if the corn is not ensiled until it has matured too much, water will have to be added if there is to be sufficient moisture to encourage fermentation. As a matter of fact there should be about 70 per cent. of moisture in silage to guarantee the best quality. Less water is likely to result in the development of molds as well as a less palatable feed, while much more moisture will produce a silage high in acidity. So far as we know there is nothing to the contention that the juice from silage will destroy the walls of a silo due to the acid in it, but it is a good plan, however, to wash the inner walls of the silo every few years with a creamy cement.

From what has already been said regarding molds and moisture it may readily be gathered that the value of silage as a feed depends to quite a degree upon the amount of water contained in it, and upon the care with which it is preserved from the air. The dry matter of silage, of course, contains all the nutrients and experiments have shown that ensiling the stalks alone gives a silage which weighs less per cubic foot and is less valuable as a feed by a very considerable amount. Thus a measured bushel of silage made from the stalks alone is not much more than half as valuable as the same quantity of silage made from well-eared corn, where the ears are ensiled also. By weight, a bushel of silage made from the stalks alone is 63 per cent. as valuable. In addition to this fact the digestibility of the grain probably exceeds that of the stalks.

As to the money value of silage as a feed, opinions will differ, but it will be generally conceded that silage is as economical a feed for dairy cows as it is possible to produce on the farm. Some follow the rule in valuing silage that it is 40 per cent. as valuable as timothy hay. We take it that this rule may or may not hold good, depending upon the character of the season and the purpose for which the timothy hay is used, because the latter as a feed for milk production is not to be recommended at any time. It was proven at the Indiana Experiment Station that for feeding steers over an eight-year period silage was worth \$11.30 per ton when corn was worth \$1.50 per bushel, and that when corn sells for \$1.25 per bushel silage is worth \$10.21 per ton. These figures have reference to the feeding value of silage as compared with the market prices of grains, but in most cases the cost of silage in the silo is not so high. Last year the Dominion Experimental Farms stated that the cost of silage in the silo was about \$3 per ton, but we doubt very much whether many farmers were able to produce it at that figure. The probability is that the average cost was much closer to \$5, and even higher in many cases. So far this season corn has not had the best chance to grow on account of the cool weather, and if the yield is down the cost per ton of silage from this crop will be proportionately higher. Hence the necessity of paying extra attention to the matter of proper maturity at cutting time and good preservation in the silo. The proper time for cutting is when the corn shows the first signs of ripening. The kernels will then be in the firm dough stage, or just about at the stage, when it will be possible to shell them off the ears. This will be just about the time that the ear begins to glaze.

An increasing number of dairymen are annually beginning to appreciate the value of the summer silo. When the short pastures occur during the last of July and early August the cows must have a supplementary feed of some kind or the milk yield will be decreased. Soiling crops are sometimes grown, but on the average farm these are much more expensive to grow than silage, and many farms now have a second silo to provide this supplementary summer feed. There is little doubt that summer silage is profitable and the coming years will see much more of it in use.

TABLE I.
Daily Feed for Various Kinds of Stock.

Kinds of Stock	Weight of Animal	Pounds Silage Per Day
Colts	500	5
Stock horses	1,200	12
Work horses	1,300	10
Calves	500	12
Stock cattle	1,000	20-30
Beef cows	1,300	30
Dairy cows	1,000	30-40
Dairy cows on short pasture	1,000	15
Fattening cattle	1,200	25
Stock sheep	—	2-3
Fattening sheep	—	2-3

TABLE II.
Relation Between Amount of Herd and Diameter of Silo.

Diameter in Feet	Approx. Weight of Layer, 2 ins. Deep to be Fed Daily		Number of Stock Required at			
	Winter	Summer	40 lbs. each	30 lbs. each	20 lbs. each	15 lbs. each
10	263	525	13	17	26	35
11	—	633	16	21	32	42
12	378	755	19	25	37	50
13	—	885	22	29	44	59
14	515	1,030	25	34	51	69
15	—	1,178	29	39	59	79
16	670	1,340	33	44	67	89
17	—	1,513	38	50	75	101
18	850	1,700	42	56	84	112
20	1,050	2,100	—	—	—	—

Good Cheese Sale for United Dairymen.

EDITOR "THE FARMER'S ADVOCATE":

We held our 10th sale on Friday, Aug. 6, and taking all the circumstances into consideration we consider it the most successful of the series. The grave situation in Europe, the continued fall in foreign exchange, and the fact that the export market for several days was practically at a standstill, all combined to disquiet the cheese trade, and on Friday morning several of the Montreal exporting firms endeavored to arrange for a general agreement that no cheese would be purchased outright on either Friday or Saturday. However, this arrangement was not effected, but it was understood that the prices would be kept at the lowest possible figure. At Gould's Cold Storage, 7,000 boxes, mostly from Ottawa Valley points, were sold on Friday at 23½ cents for colored, and 23 cents for white. The cheese boarded at Brockville on Thursday had not been settled for, but had been shipped to Montreal subject to prices being arranged later. On Friday morning, however, the situation looked better to the writer, and as I knew that some cheese was required for prompt shipment, I decided to hold a sale. The prices we obtained were extremely good, and were a cause of annoyance to several of the large firms here. When the prices became known, several of the salesmen who had sold at Gould's went after the buyers and got another fraction of a cent out of them. The prices we made undoubtedly set the pace for Saturday's boards, but Cornwall got only 25 3-16 for colored against 25 13-16 for our No. 1 colored, and 25½ for our specials. Prices on the country boards showed a wide fluctuation, white cheese fetching 23 cents at Campbellford and Stirling on Thursday, and 25½ at Belleville on Saturday. Colored cheese brought 23¼ at Stirling, 24½ at Iroquois, and 25¼ at Belleville, while 24 cents was the best bid at Perth, and 24½ the best bid at Napanee.

The prices at our sale on Friday were as follows: 160 special colored at 25½; 1,035 No. 1 colored at 25 13-16; 117 No. 2 colored at 24 13-16; 35 special white at 24 15-16; 520 No. 1-white at 24½; 102 No. 2 white at 23½.

At Gould's on Tuesday 7,000 boxes colored and white sold at 24½ cents delivered Montreal, and on Friday the same quantity at 23½ cents for colored, and 23

cheese weighing. Unfortunately last week he was out of town, and it was only possible for me to have one lot re-weighed. I have written the Dairy Commissioner, Ottawa, pointing out that we need the inspector particularly on Thursday and Friday of each week, and asking him to arrange so that the inspector will be here on these days. I am bound to say that all the weights that have been re-tested have shown that the weighing by John McLeod, the public weigher, has been accurate. I think it desirable, however, to have all lots re-weighed that show a loss of a pound a box and over, and hope to have this done in future.

Notwithstanding the premium obtained on colored cheese last week, I am still firmly of the opinion that too large a quantity of colored is now being made, and that before long white cheese will bring the higher price. It is difficult to say just when this change will come about, and I hesitate to take the responsibility of advising factories to change from colored to white immediately, because the former may bring a higher price this week and possibly next. Last week we had one new factory from Leeds County, and we are advised of several new factories that will ship this week.

W. W. MOORE.

Manager United Dairyman Co-operative Limited.

HORTICULTURE.

Planting Deciduous Trees About the Farm.

Nearly everyone likes to see nice trees. They have many uses on the farm, either to beautify the home surroundings, to set off the roadside, or to provide shade for the live stock in the pasture. It is not much trouble to plant an occasional tree or group of trees where they will be appreciated and helpful in making farm life more appreciated and some way or other a beautiful countryside is nearly always associated with the presence of a sufficient number of trees to relieve the monotony of bare land, roads and fences. Too many of our farm houses lack the natural beauty and the coziness which a few trees wisely placed will bring to them and it is unfortunate that more trees are not to be found in some sections. Nice shade or ornamental trees not only add to the contentment of those who can enjoy them, but they add materially to the appearance and selling value of any farm that possesses them and for this reason, if for no other, they should be planted out in reasonable numbers on every farm that has not already an abundance.

There are many deciduous trees native to Eastern Canada that are much more attractive than foreign varieties. The latter are too frequently planted to the exclusion of native varieties especially when these are fairly easily obtained. Trees may be planted in the spring or fall and if the latter is decided upon the planting may be done at any time from August to October. Fall planting is not desirable, however,

unless the district is suitable and weather conditions favorable. For all planting the season should be long and the climate such as will give the trees a fair chance to take hold of the ground to some extent before the severe winter sets in. If the soil is poor it should be well prepared and a good quantity of loamy soil or well rotted manure worked in. The hole into which the tree is to be set should be dug deep enough and large enough to accommodate the roots of the tree without too much crowding and it is advisable to place the larger roots toward the prevailing winds to assist in anchoring the tree. In most respects one should plant shade trees after the same manner as one would plant fruit trees and they should be set somewhat deeper than they were before they were dug up. If they are nursery trees that have been budded or grafted, the union of stock and scion should also be buried. After the tree is set



Sweet Corn is One of the Most Popular Crops the Market Gardener Can Produce.

cents for white, delivered Montreal. Prices on country boards were: Peterboro colored, 25¼; Campbellford, 95 boxes colored at 25 9-16; 654 white at 23; Brockville 3,000 offered, no bids; Stirling, 23¼ for colored, 23 for white; Vankleek Hill, 25 1-16 colored, 24 11-16 for white; Iroquois 24½ for colored; Perth, the best bid for colored and white was 24, with no sales; Napanee 24½ bid for colored, with no sales (cheese sold on curb we understand at 24¾). Picton, 25 9-16 for colored; Winchester district, 24¼ for colored; Belleville colored, 25¼, white, 25¾; London best bid 24½ with no sales; Cornwall, 25 3-16 for colored.

The drop in Sterling exchange last week amounted to 8 cents on the pound.

We have been watching the weighing of our cheese very closely, and I have had a large number of lots re-weighed by the Dominion Government inspector of