lows next. It is preferable to the cultivator because it works on the surface, and does not turn up any sod or grass. The first discing should be across the sod. A second discing may be advisable. An occasional harrowing is all that is all that is required until previous to sowing, when another discing or two is necessary.

If manure is to be put on the sod it should be applied with a spreader either before or after the first working. Even three loads of manure an acre makes an appreciable difference.

Another method which gives good results is to put the wheat on stubble land, preferably after barley or peas. In this case liberal manuring is called for. It may be applied before or after plowing—depending on the amount. The land should be plowed four or five inches deep, then thoroughly pulverized on the surface, with roller, disc and harrow. There are some objections to this method. The main one is that after harvest the land is often so dry that it is difficult to plow it or reduce it to a fine condition. It also lengthens the rotation, as it is not the best plan for cereals to succeed one another. The practice of sowing wheat on the same land for two successive years is not to be recommended.

THE TIME TO SOW

The time for sowing wheat depends on the condition of the land, and on the locality. A few years ago late sowing was practiced to avoid the ravages of the Hessian fly. Now this precaution is not necessary and earlier seeding is in vogue. If the land be rich and in good condition, sowing may be delayed at least one week longer than if the land be in poor heart. The season also affects the time of sowing. If growth be backward, earlier seeding is necessary. At any rate the grain must be sown early enough to grow sufficient top to protect it well during the winter and spring. A heavy top will hold the snow and prevent heaving by the frost. The dates for sowing may be limited from Aug. 25th to Sept.10. Of late years, the early sowing has given much better results.

A great number of varieties are grown but a few are worthy of special note. Dawson's Golden Chaff is a very popular variety, and is deservedly so. It is a very heavy yielder, and stands well in the field. It, however, has one slight objection; the grain is not the best for milling purposes. As millers make no discrimination in price it is worthy of high standing. Some selected strains of this variety promise to outclass everything.

Other varieties which are popular because of the hard qualities of their grain are—Imperial Amber, Michigan Amber, Genesee Giant, and Turkey Red and Early Red Clawson. These varieties are inclined to weakness of straw, and lodge badly at times. In practice, it has been found best to change varieties every few years. Although wheat has been grown for many years, there are many things yet to be learned about its culture.

Cement Curbing for Well

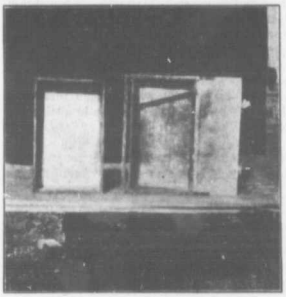
A novel feature in well construction was recently noticed by a representative of the Dairyman and Farming World on the farm of Mr. J. D. Fowler, Peterboro Co., Ont. This well, which was under construction at the time of our visit, was 32 feet deep. It was curbed with cement tile such as is used for culvert construction. The tile were two feet in diameter and two feet six inches in length. The tile were manufactured by a local man who took contracts from the council for getting them out. He manufactured the tile for Mr. Fowler in spare time. They cost him $1 each or $13 for tile enough to curb the whole well.

The well made a very neat appearance, and being clean, easily built, there was practically no danger of it ever caving in. The best feature of all was that the material cost so little, and there was but little labor in constructing the well.

Preventing Waste of Clover Seed

Those farmers who have wished that they could save their alsike seed without the heavy loss that usually occurs when the crop is being harvested, will be interested in the illustration which shows a small model of an alsike table used by Mr. Dan Crough, of Ennismore, Peterboro County, Ontario. On the right may be seen the table and on the left a drawer which fits into the table, and into which the alsike seed falls. When the drawer is full it can be lifted out of the table and emptied with ease.

The table can be made of any size and can be used in the harvesting of red clover and of buckwheat. Mr. Crough uses a table five feet square, although the table can be made to fit almost any cutting bar. The table is so constructed that it can be attached to the cutting bar. A zinc plate runs back from the cutting bar for two feet where a wire mesh fits over the drawer. The alsike as it is cut runs up over the zinc onto the mesh through which the seed falls into the drawer. Mr.



A Device for Catching Clover Seed

The drawer fits into the table, which is attached to the mower bar when harvesting. See article "Preventing Waste of Clover Seed.

Crough informed us that he has saved a half bushel of alsike by means of this table while cutting twice around a seven acre field.

"Having this table," said Mr. Crough, "enables me to wait until the crop is matured and dry and almost ready to go to the barn before I cut it. I can cut and haul it to the barn the same day. When alsike is cut green and gets wet and has to be turned over in order that it may dry, a lot of the seed is lost." The model of this alsike table was exhibited by Mr. Crough last year at the Jamestown Exposition.

Cost of Producing Milk

The conditions of the milk market, together with the restrictions that are being placed on the milk producers by the authorities of many of our cities, has brought the more apt and business-like of these producers to get down as far as possible to estimate the cost of producing milk. We can scarcely take up an agricultural journal in which some phase of this important matter is not discussed. Recently two agricultural journals, a dairy paper published in New York, and The Country Gentleman, published in Albany, N. Y., had letters from producers giving the cost of producing a quart of milk.

From the first mentioned journal, we take the figures of "Medico," whose herd of 20 cows averaged 2190 quarts (wine measure) of milk, equal to 4654 lbs. Not a large yield, it is true, but an average yield. This milk cost to produce, 4½ cents a quart. To arrive at this return, an estimate was made of the value of cows, of land, and of buildings. On these were charged interest on investment, insurance, taxes, depreciation of buildings and stock. This charge amounted to $695, concentrated feeds, $365; ensilage, $280; hay, $438; and labor, $328, were charged up as running expenses, bringing the total estimated outlay, $2106.

The returns give 29,200 quarts milk, sold for 3½ cents a quart, $1022; 14,600 quarts milk sold for 2½ cents a quart, $365; 20 calves, sold at $2, $40; making a total of $1427. This would leave a loss of $679, or practically no return for interest on investment, insurance, etc.

VARYING ESTIMATES

From The Country Gentleman of the same week, I read the letter of "Dairy Farmer," whose herd of nine Holsteins and 15 Guernseys and Jerseys, produced in one year 67,200 quarts of milk, averaging 4.2 per cent. of fat. The cost of food consumed is given at $1430, estimating ensilage at $2 a ton, and hay at $15 a ton, or about 2.1 cents a quart. The labor bill seems high, $1277, or 1.9 cents a quart; while incidental expenses figured out to 0.8 cents a quart. This makes the milk sold cost approximately 4¾ cents a quart. Surely a high figure, but when we take into consideration that these cows were stable fed the whole year, as no item for pasture is given, we need not be surprised that the estimates show these figures. This same writer quotes from the records of the New Jersey Experiment Station for 1906, showing the cost from April 1st, 1904, to April 1st, 1905, for 38 cows, 15 of which were Holsteins and Ayrshires, and 23 Guernseys and Jerseys. The average milk yield was 6261 pounds, averaging 4.38 fat. Cost of food a quart of milk, 1.56 cents. Cost of labor, interest and 10 per cent. depreciation, 1.04 cents, a quart, making the milk cost 2.60 cents a quart. Comparing these figures with the others, either the estimate of labor in the others is too high, or in this case it is manifestly too slow, as only $750 is allowed for caring for 38 cows. Although nothing is said about pasture we assume that the cows were on pasture part of the time. In this case, too, the crops were grown under the most favorable conditions, which reduced the cost materially.

A FAIR ESTIMATE

Again, in making comparisons of this nature, we must note conditions then, and now. To-day all concentrated feeds are 20 to 40 per cent. higher than in 1904-5. Assuming that feeds were 25 per cent. higher now, than four years ago, it would mean that this milk would cost to produce 3¼ cents a quart, which, sold at market prices, would not give a large profit to the owner. From our own experience this latter is a fair estimate for the average dairyman, a few do better, many do worse. During the years 1902-3 and 4, when our herd averaged about 6500 pounds of milk a cow, the approximate cost for feed alone, counting five months pasture at $7.50, was $38 a cow, or 1.05 cents a quart (Imperial.) Interest on investment, labor and depreciation, etc., would be another 1.15 cents, or about 2.20 cents a quart, to produce our milk in those years. To-day, with a reduced flow caused by bare pasture, (owing to drought and consequently more feeding of soiling crops and concentrates) and higher prices for all classes of feeds, we may safely estimate our milk costs us to produce about 3.20 cents a quart, or about $1.20 a cwt. for the year. These figures are for the production of market milk. Milk may be produced for the cheesery and creamery at a lesser cost, as the cheapest feed is largely consumed during the summer months, when the bulk of the milk is produced.

Many things enter into the estimate of the cost of making milk, such as the time the cows freshen, cost of feeds, quantity of soiling crop, whether a silo is used or not, care of herd, feeding, housing, etc., so much so that it is one of the most difficult problems the dairyman has to solve. Possibly no two dairymen have the same conditions to face, hence the estimate of no