

Some Silo Pointers.

It is impossible to state the exact size of a silo to be constructed for a given number of cows. Variation in the size of the animals will determine whether each cow is to receive 24, 30 or 40 pounds per day. The silo should be of such a height and diameter that at least 1½ inches of silage will be used each day. It is better to have the diameter small enough to make possible the feeding of two inches from the top each day, as this keeps the top of the silage from drying out and moulding. Silage will settle considerably, and the filling process should not be carried on too rapidly. The best method is to fill the silo to the top, and then allow the silage to settle for three or four days, then fill up again. In this way the desired amount may be secured.

It does not pay to build a silo for less than ten head of cows, but it would probably be better to build the silo, and then purchase more cows.

The silo should be round, since less material is required for the construction of a round silo of given capacity than for one of any other shape. Silage will keep better in a round silo, for this shape makes possible a more thorough packing.

The silo should be air-tight; otherwise, air will come in contact with the silage and cause rotting or "dry firing."

The inner surface of the wall should be smooth. If the inside wall has irregularities, there is almost a certainty that open spaces will be left between the wall and the silage as the latter settles. The air will pass in at these openings, with results mentioned above.

The walls should be rigid enough to prevent cracking; they are also better able to withstand strong winds, which exert a great force upon the side of a silo.

The walls should be non-conductors of heat and cold, since silage is kept nearer the temperature at which it was packed during the filling.

As a matter of economy, every building should have a roof. This will prevent rain and snow from destroying the interior, and will aid in preserving the material stored. There are sections of the country where a silo roof may not be absolutely necessary, but the probabilities are that if a roof were provided, the silo would last many years longer. In cold climates, it is highly important that a roof be provided.

To include all these features of a good silo, there can be no better type than the well constructed concrete silo.

The above are a few useful hints from bulletin 214 of the Agricultural Experiment Station of the University of Wisconsin, by C. A. Ocock and F. M. White.

Turn the Furrows Carefully.

Plowing is one of the most important farm operations, but a large number of farmers do not seem to recognize the fact. The autumn is the season when the greater portion of the plowing is done, and at the present time thousands of teams and men are employed in turning the furrows of the fertile soil which is to produce the next year's crop. Spring seeding being so far distant is not always thought of as being closely connected with the autumn plowing, yet the ease with which it is accomplished, the good or poor tilth of the soil, and the rapidity of growth and general condition of next year's crop, be it grain, green fodder, or hoed crop, depends directly, and to a greater extent than many people realize, upon the kind of plowing and cultivation practiced during the fall previous. Some of the older men tell us that the plowing done now does not compare very favorably with the plowing of a decade or two ago. Whether or not this statement is true, we are not prepared to state, but certain it is that in travelling through the country one sees some very poor work done with the plow. It can scarcely be called plowing. It is, as many farmers term it, simply "rooting," and a very rough, uneven surface is left. Many put forth the plea that straight and even work cannot be accomplished with plows which turn two or more furrows at a time. True, a better job can be done with the single walking plow, because every movement of the implement is under the complete control of the hand of the operator; but there is no reason why first-class work cannot be done with the larger plows of either riding or walking build. By taking the trouble to open out the lands and finish the dead furrows with the single plow, nearly as straight furrows can be set up as where the single plow is used throughout. It takes more care to accomplish this, but surely the plowman can afford to take this extra trouble when he is doing the work as fast as two or three men did it a few years ago. Again, the larger plows are mounted on wheels, and the depth is controlled by levers. Surely it is not beyond the skill of the operators to so adjust these levers as to turn even and level furrows. Some fields have been noticed where, to look at the work done, one would think two or three different plows, differently set, had been used, one behind the other. Yet this uneven work was done by one and the

same plow. Other fields have been observed where the furrows turned with the same style of plow were true, level and straight, leaving nothing to be desired. In most cases, the kind of work done rests largely with the man operating the plow.

Plowing, as before stated, is one of the most important operations connected with soil tillage. The careless workman will tell you that it makes no difference how it is done, as long as the land is blacked over. Keep this kind of work up for a few years and see the result. In most cases the farm will be overrun with foul weeds which have not been killed by the inefficient cultivation, and which have been permitted to thrive and crowd out the sickly stand of the crop which has been striving feebly to grow on the only partially-worked soil. No plowman can do good work who allows his plow to run deep and shallow, alternately, and who is some of the time cutting a three-inch furrow, and the remainder anywhere from that width up to fourteen inches. In order to cut all the ground, and thus sever all roots of weeds and other plants, it is necessary that an even width be followed; and, while some very well turned crooked furrows have been seen, the best work is often usually where the plowing is reasonably straight.

The depth, besides affecting the turning of the furrows, is a very important factor in fall plowing. During the growing season, nowhere near the amount of moisture which is necessary to mature a crop reaches the earth in the form of rain; therefore, some steps must be taken to conserve moisture which has previously reached the soil. Especially is this true of dry seasons like the one we have just experienced, and, as we never know when these are coming, it is al-

seven days in a week, 10×7=70 pounds a week. No self-respecting, industrious cow would want more than twelve weeks' holidays in a year; that is more than our school teachers get. Then, that would be 40 weeks, 70×40=2,800 pounds in a year, which, calculating the milk to bring, say, 90 cents per 100 pounds, would give about \$25 per annum as the extra earning of the cow that gave just 5 pounds at a milking more than the others. Now, then, let us try the multiplication table at it again. Suppose the average term of usefulness of this 5-pound-extra cow be 12 years, we have seen that it amounts to \$25 per year. Well, let us put this \$25 out every year at 5 per cent. interest, and compound the interest every year during the 12 years that this cow has been useful, and we have how much? Just \$371.63—all from the 5 pounds extra at a milking. Is not this worth looking after? And this cow probably did not eat any more than the others, and did not likely take any appreciable more time to milk; yet, in her lifetime she has brought me in \$370 more than the others. But let us apply the multiplication table just once more. Supposing A and B are farmers living on the same concession line, and each has twelve cows, but A's cows each just give 5 pounds at a milking more than B's cows. Then, \$25×12=\$300 per annum that A makes more than B. Now, if A puts this \$300 out at 5 per cent. per annum, and compounds the interest every year for 12 years (being the average years of usefulness of the cows), how much money has A more than B? Just \$4,427.79. Whew!

Now, don't go and say that this is only visionary, sentimental or illusionary. These are facts brought out by the application of the multiplication table to the products of the dairy cow, and the immortal Scottish poet wrote that "Facts are chields that winna ding"; that is, big strong men that cannot be pushed over. From the 5 pounds extra that each of A's cows give more than B's, at the end of every twelve years, A has money enough over and above B's receipts to build a good brick house and furnish it complete.

Now, then, this being the case, what are we going to do about it? Let us be practical. Let us get rid of the poor cows; and we have got to weigh and test their milk to find them out. I believe the only practical way to get good cows is to raise them. Purchase a pure-bred Ayrshire or Holstein bull, raise all the heifers from good-milking cows, and in a few years we will get into good cows without any great expenditure of capital. And then, we must feed the cows well. A good dairyman once said to me, "If you don't put feed in the cows' mouths, you need not expect to get pailfuls of milk." D. LAWRENCE.

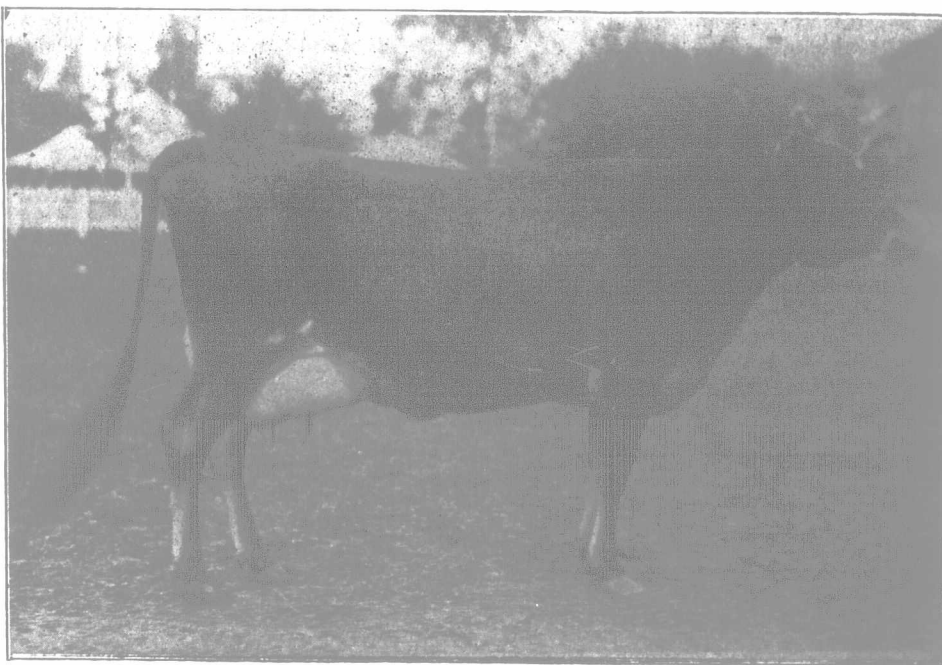
Washing Made the Difference.

By Laura Rose.

For seven days I judged the buttermaking contest at the Toronto Fair, and twice each day, in one particular alone, I longed to give one word of instruction—that was regarding the washing of the butter. It was there the greatest imperfection lay in the splendid work done by the young ladies.

Had I not given a demonstration on the eighth day, and made butter under exactly the same conditions, having the same cream, etc., I might have concluded that the defects in the granules and finished butter were probably due to the nature of the butter-fat.

I had my cream at 56 degrees, which was the average temperature for the cream throughout the week. The butter broke in about twenty minutes, when the granules were about half the size of wheat grains, I added two or three quarts of cold water, and kept up the speed of the churn. Fast churning prevents an uneven granule. Slow churning is the proper thing when, if, after the butter breaks, it is slow at gathering. Adding water in this manner before the churning is quite complete, gives a more exhaustive churning, thins the buttermilk and floats the butter out of it, thus



Mansella's Rose (imp.).

First-prize three-year-old Jersey cow, Toronto Exhibition, 1911. Imported and exhibited by Sir William Mackenzie, Kirkfield, Ont.

ways well to be prepared for them. No better plan can be suggested than fairly deep fall plowing. The deeper the soil is stirred, within reason, in the fall, the more of the winter and spring moisture will it retain for the use of the crop. Loose soil holds more water than compacted soil. It is, then, evident that, from a moisture-holding point of view, a fairly deep, even furrow is much to be preferred to an uneven, shallow one; and, as practical men well know, land that has been well plowed works up much better than poorly-plowed land, so better tilth and a finer seed-bed are possible after good fall plowing. Take a little more time and do the plowing more carefully, and the results will justify the extra pains taken, and less time will be required in placing the land in condition to produce a crop.

THE DAIRY

The Dairy Cow and the Multiplication Table.

Editor "The Farmer's Advocate":

We have been weighing our individual cows' milk for the past two seasons, and I have been thinking over the results a little. Now, suppose the cows give 15 pounds at a milking, and one of them gives 20 pounds, this is only 5 pounds more than the others; if we were not weighing the milk, we would scarcely notice the difference, and some people would say, "Oh, it is only 5 pounds—that does not amount to much." Well, 5 pounds in itself is not much, but let us apply the multiplication table to it and see how it looks. Five pounds at a milking, and we milk twice a day; then, 5×2=10 pounds a day; and there are