

being of $\frac{3}{4}$ -inch size and the rest of them are $\frac{1}{2}$ inch.

After allowing for the door frames it required 74 staves, one staff being made up of 2-inch and 3-inch pieces in order to get the bands as full as possible, and I may say that after getting the bands full in this way we used only about one and one-quarter inches of the thread on the rods to tighten the silo perfectly tight.

The foundation is built of cement and is saucer-shaped. The roof is an eight-sided construction and we used eight rafters covered with ordinary one-inch lumber for sheathing and covered with felt-roofing material. We put a cupola in one side of the roof to furnish light and for filling the silo. We treated all the staves with a coal-tar production, like creosote, on all the edges, ends and outside to prevent decay. We are appending a list of all the material used in the construction, and are valuing the staff material at same price which our neighbor paid for the same kind of material dressed, tongued and grooved and bevelled to fit the circle the same as ours is:

Foundation—	
Gravel, 2 loads at \$1.00 each	\$ 2.00
Cement, 2 barrels at \$1.70 each ..	3.40
Staves—	
148 2 in. x 6 in. x 12 ft., 74 2 in. x 6 in. x 6 ft., 2,220 ft. at \$5.00 per thousand	55.50
Creosote, 6 gal's. at \$1.00 per gal.	6.00
Roof—	
8 pieces 2 in. x 4 in. x 8 ft., 200 ft. sheathing, 248 ft. at \$20.00 per thousand	4.96
Felt roofing, 2 squares at \$2.75 per square	5.50
Doors and door frames, complete ..	10.00
Iron banding, furnished with nuts and threaded	17.60
24 malleable clips at 20c. each ..	4.80
100 ft. galvanized wire, No. 9, for guy wires	.35
Window for cupola	.60
	\$110.71

We did all the work ourselves, and two men can put the silo up complete in six and one-half days.
A. B. ARMSTRONG,
Northumberland Co., Ont.

Horse-Power Silo-Filler.

Editor "The Farmer's Advocate":

Being very much interested in your instructions about making good silage, I read your articles concerning them with great pleasure. By the time this reaches you the season for ensiling corn will likely be over. Just now I am hearing the hum of a blower intermitted by the rattling of the ensilage cutter. Frost occurred very early this year, the corn in this locality being very badly frozen at the time of writing (Sept. 17).

The last few years some farmers in this neighborhood have purchased silo fillers, consisting of cutting box with carrier attachment. The reason why this machine is used in the above cases is two-fold. It requires only a fraction of the power necessary to operate as is the case with blower machines. A three- or four-horse power engine does the work with ease. Such a machine can be procured at less than one-half the price of a blower cutting box.

The outfit is run by horse power. Four horses are used in operating the cutting box, which is run at a moderate speed only, a speed ranging between two hundred and fifty and three hundred revolutions per minute being usually obtained. A much higher speed may, however, be given to the machine, but it is not advisable to overspeed it on account of the carriers being driven by chains as well as the flat straps consisting of chains, and if something goes wrong, for instance the carrier slats catch somewhere, a break is sure to occur. Therefore great care must be taken with this class of machine. Of course the carriers are supplied with a safety lever, but when you hear the rattle of something breaking it is already too late, especially if the machine is running at a very high speed.

The machine consists of three general parts—cutting box, short carrier and long carrier. Corn enters the machine through the hopper between two rollers. After the knives have cut the corn it falls down on the short carrier, which instantly commences to carry it away out on to the long carrier which delivers it to the silo. These machines have their drawbacks. They do not make quite as good silage as the larger blower machines do, and they are quite unhandy to set up. It takes longer for the silage to settle, and it is necessary to refill a few days after the first silage to get the silo filled to reasonable height. Many farmers use these machines, and it must be admitted that it is often profitable to have your

own machinery, so that you can do your work when you want it done, or at the proper time, which means something in silo filling.

YOUNG FARMER.

Waterloo Co., Ont.

American Road Congress.

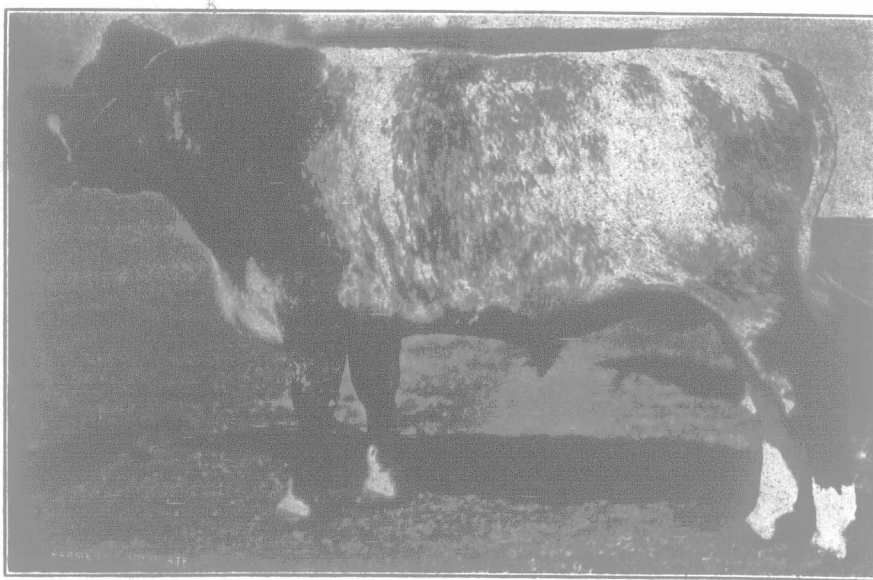
"Whereas the rapid concentration of population in our large cities and the high cost of living are due, in a large measure to bad roads, which render farms inaccessible, transportation uncertain and costly, educational advantages limited, and social conditions unattractive, we call the American Road Congress to discuss questions which may be of practical aid to the betterment of the public roads of America."



A Champion Yorkshire Sow.

Winner of highest honors at Toronto for J. Featherstone & Son, Streetsville, Ont.

The foregoing words gave the text of the inaugural message of President L. W. Page, Director of the U. S. office of Public Roads, Washington, to the American Road Congress last week at Detroit, Mich., attended by nearly 5,000 delegates. In addition to road experts, nearly every important interest on the continent was represented, and sympathetic messages were received from President Woodrow Wilson and others. The U. S. Department of Agriculture had model exhibits of roads and road materials from the time of Julius Caesar down to the present. The Canadian government was ably represented by A. W. Campbell, Deputy Minister of Railways and Canals. Chas. A. McGrath, Chairman of the new Ontario Highways Commission, and Messrs. McLean and Rankin were present, accompanied by the Hon. Dr. Reaume, Ontario Minister of Public Works.



A Winning Steer.

First-prize yearling Shorthorn steer at Toronto. Owned by T. A. Russell, Toronto.

THE DAIRY.

Toronto Milk Prices.

A meeting of the Toronto, Ont., Milk and Cream Producers' Association was held last week, attended by about 138 dairy farmers, representing some 700 milk producers, and a territory of about 50 miles around the city. By reason of the increased cost of farm help and foods, the advance of probably \$20.00 each in the price of cows, the raise of the standard from 3 per cent. to 3.25 per cent. butterfat, and the more costly sanitary regulations imposed by the local health department, an advance in the price of milk was felt to be imperative. It was, therefore, unanimously resolved to raise the price of the eight-gallon can to \$1.70, an increase of eight cents over the present prevailing rate,

which would it is estimated by the dealers, who are resisting the movement of the producers, bring the retail price of winter milk up to about 12 cents per quart. Secretary A. J. Reynolds, of Solina, was directed to notify all the producers in the association of the decision reached by the meeting, which was presided over by J. G. Cornell, President, of Scarboro.

Periods Between Milkings.

The periods between milkings should be as nearly equal in length as possible. It may be stated, however, that experiments conducted at the Central Experimental Farm, Ottawa, show that where cows are milked only twice a day, as is the usual practice in Canada, a considerable deviation from this general recommendation may be made without any appreciable effect upon the result in a given period of, say, a couple of months' duration. This is true, of course, with certain limitations, thus, while milking at ten and fourteen-hour intervals might be expected to prove satisfactory, milking at six and eighteen-hour intervals would very certainly prove injurious in effect.

It should be noted, however, that what is true in this respect about a 30 or 40-pound-a-day cow is not likely to be true with the 50 to 60-pound-a-day cow, and even much less so in the case of very heavy milking cows yielding, say, 70, 80 or 90 pounds a day. In fact, it is practically certain that no cow would ever reach 80 or 90 pounds of milk a day, if the milking were being done only twice in 24 hours.

It should be observed that the milk yielded by cows milked at unequal periods, but at regular hours, is likely to vary in quantity proportionately with the length of periods but to vary inversely as to quality of milk. This might be better explained by saying that, while cows yielding 30 lbs. of 4 per cent. milk, or 1.20 lbs. butterfat, and milked at 6 a.m., and 6 p.m., might be expected to give about 15 lbs. of 4 per cent. milk, night and morning, the same cows milked at 6 a.m. and 4 p.m. would quite probably continue to give 30 lbs. of milk in the 24 hours, but would generally produce the milk and butterfat about as follows: At 6 a.m., 17 to 18 lbs. of 3.5 to 3.75 per cent. milk, and at 4 p.m., 12 to 13 lbs. of 4.3 to 4.6 per cent. milk.

It has been demonstrated, too, that not only may the quality of the milk produced by any given cow vary from milking to milking in a fairly regular way, but it may vary materially from day to day as affected by a multitude of minor influences, such as variations in weather, supply of water and salt, change in quality of food or of method of time of feeding, change of milkers or time of milking, fear, anger, uneasiness or discomfort in any form.

Further, as any dairyman soon learns, the quality of the milk improves as the actual milking operation progresses. The first milk drawn is invariably low in butterfat. As the operation progresses, the milk becomes richer.

Those dairy farmers who are carefully noting the total production of each of their cows for the season are finding some curious differences. For instance, in one Ontario herd the yield of a nine-year-old grade that freshened March 5th was 4,080 pounds of milk up to the end of July; her stable mate, also nine years old, that freshened March 12th, receiving the same feed and care, gave only 2,970 pounds of milk. Over half a ton of milk in that short period indicates a considerable difference in income between the two cows. In another herd at the same factory, between two six-year-olds that calved April 3rd and 4th, there is a difference of 1,400 pounds of milk and 60 pounds of fat up to the end of July. This means between fourteen and fifteen dollars that one cow earned more than the other. Are your cows workers or shirkers? Dairy records alone will provide the means of ascertaining these facts beyond question. Forms for weighing milk either daily, or on three days per month, are supplied free by the dairy division, Ottawa. In your letter of application state which you want.
C. F. W.

To keep up the milk flow, stable the cows and feed liberally during cold, rainy periods in late fall. A chilled cow seldom gives her usual quantity at a milking.