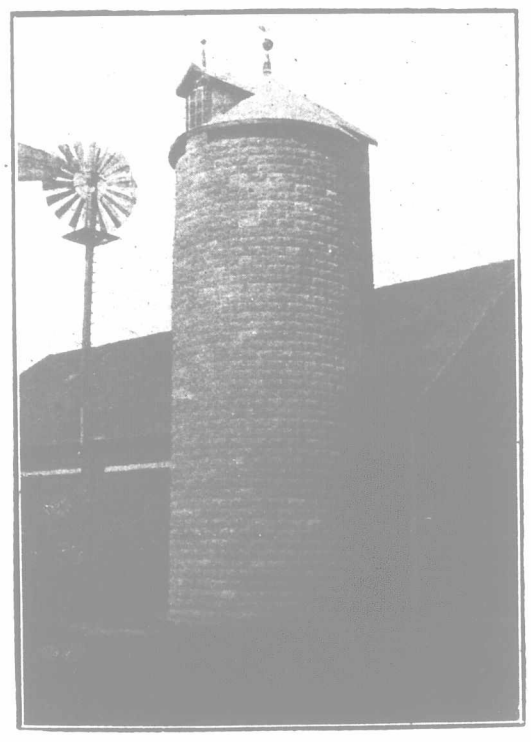
eggs, and another brood is brought out. Sanderson says that each female is capable of laying 150 eggs, and that the greatest injury is done by the mature nymphs and adult bugs of the first brood. No satisfactory means of combating the chinch bug was known until quite recently. Experiments in Kansas have resulted in the finding of a contagious disease which works havoc among the bugs. The disease is spread by distributing diseased bugs throughout affected areas. We had not known lady-bird beetles to attack this pest. If such is the case, they should prove effective in combating it. It is scarcely likely to do much damage in Canada, on account of our colder winters, but in places where it has made its appearance, as suggested by our correspondent, farmers would do well to be on the look-out for any appearance of it next spring.—Editor.]

Galvanized Roofed, Cement Block Silo.

M. C. Bell, Oxford County, Ont., erected a silo of hollow cement-concrete blocks on his farm, a couple of miles from Ingersoll, in 1910, so that it has now been filled twice. This season's crop of White Cap Yellow Dent corn, which, by the way, took first prize in the Provincial field-crop competition for the district, went into this silo this year, filling it within three feet of the top. The dimensions of the silo are 12 feet 8 inches wide inside, by 46 feet from floor to plate. The barn stands on a gravelly hill side, so that on the upper side the silo wall extends 10 feet below ground, but on the opposite side the silo floor is just 2½ feet below the stable floor. The cement block are 16 x 8 x 8 inches, made to suit curve of wall. The roof is constructed of about nine-



M. C. Bell's Silo.

teen scantling, rafters centering at top, with one circuit of braces some distance above plate, which was bolted down by T bolts from below second row of blocks. No board sheathing was used on roof. The rafters were covered with ordinary galvanized iron sheets cut diagonally, so that there was little waste. Over the joins a metal ridge roll was nailed down. The metal material and work cost $35.50, and material, teaming and labor, for rafters and two dormer windows, about $6, making in all some $41.50. The cost of cement and gravel, making and laying blocks, cement floor, plastering and cement washing, amounted to about $318. To this, add about $50 for teaming and assistance by man in mixing mortar, making a grand total for the completed silo of about $409.50.

To Level Cradle Knolls.

Editor "The Farmer's Advocate":

I saw an inquiry a short time ago in "The Farmer's Advocate" about how to level cradle knolls. I submit description of a device which will do the work, and do it well, too. It will require four horses to draw it, if there is much to be done. It is made of two poles 12 or 14 feet long, 6 inches thick, with 2 x 4 scantling, about 5 feet long, bolted across the bottom side of the poles. These cross-pieces cut the tops off the knolls and drop the earth into the hollows. Of course, the ground must be plowed and worked somewhat first. ARTHUR T. BROWN.

Elgin Co., Ont.

THE DAIRY.

Our Prize Essay Competition.

In response to our offer of three cash prizes, made in the October 5th issue of "The Farmer's Advocate," for the best essays on "The Care and Management of the Dairy Cow at Time of Parturition," we received seventy-one essays. This exceedingly large number goes to show the importance which practical dairymen give to this subject. The essays were, on the whole, very practical, and well written. Nearly every one of them covered the subject thoroughly, and the task of selecting the prizewinners was most difficult. Space forbids the publishing of more than a very few of those competing, perhaps not more than the prizewinners. We wish to compliment all those who contributed, and those not securing prizes need not feel in the least discouraged. It is no disgrace to be beaten in so keen a competition. We hope that our readers will receive much benefit from the essays which we publish, the first and second prize contributions appearing in this issue. In judging the essays, the greater number of points was allowed for the practical information, yet the manner of telling it was an important factor, the matter in several essays being excellent, but the manner of stating it lacked finish. Some very good essays were thrown out because they contained a number of words which exceeded the limit. Many of the essays contained statements of practices with which we could not altogether agree; in fact, some of the prizewinners are included in this class. So, in placing the prizes on these essays, it was a matter of weighing up all the points of matter and composition. The prizewinners are:

First Prize, $15—Chas. M. Macfie, Appin, Middlesex Co., Ont.

Second Prize, $10—Thos. Kerr, Vankleek Hill, Prescott Co., Ont.

Third Prize, $5.00—James Young, Kirkfield, Victoria Co., Ont.

The Care and Management of the Dairy Cow at Time of Parturition

FIRST-PRIZE ESSAY.

After an experience of thirty years in dairying, I venture, in response to your announcement, to record that experience and some observations made in so far as these pertain to and constitute the basis of our care and management of the dairy cow at parturition.

First, let me say experience teaches that the handling of the highly-organized, sensitive dairy cow is not the same easy, care-free process which applies to the quieter, easy-going producer of 2,000 to 4,000 pounds of milk.

The care begins long before the time for parturition to be due. Not only is the cow that is nourishing a quickly-growing fœtus to be well fed, but extreme watchfulness against injury from attacks of the "boss" cow of the herd, or from any of the many ways in which injury may be received, is absolutely necessary, that the labor of parturition may not be increased or the life of the cow endangered.

"Drying-up" the cow is important. Many of the troubles with the udder come from improper drying. Care must be exercised that no old milk is left in the udder. Some have ascribed to this the cause of milk fever, but whether this be true or not, certain it is that garget and other udder ills may easily result from improperly cleaning out the udder in drying.

During the "dry" period, the cow, if in the stable, must be kept in healthy condition. Our experience is that judicious feeding of such foods as ensilage and chaff, clover hay, with a few mangels, and bran with some chop, and "salt at will," keeping the bowels in good condition, and lessening the quantity of feed for a week before calving, will give better and safer resuls than dosing with mixtures which the cow does not get in natural feeding. No dairyman can profitably do without bran and some succulent food for the nourishment and healthy maintenance of the cow at approaching parturition. Every natural means which adapts the system of the cow to the work she must perform at this stage should be imitated under artificial conditions of feeding, and the care with which this imitation is exercised increases in direct relation to the increased return expected from high breeding and other artificial conditions with which we surround our cows. We must know our individual cows preparatory to and at parturition, as well as during lactation.

Difficulties in parturition occasionally present themselves. A little experience will lead us to know whether presentation is right for safe delivery or not. If all is right, in some few cases some assistance may be necessary, and be rendered with no harm to the cow, and will shorten the period of labor. If, on the other hand, examination shows wrong presentation or malformation, unless sure of our ability to accomplish a successful delivery, we leave the task to the veterinary surgeon.

Safe delivery accomplished, what next? The cow has thrown back on her system a large quantity of blood and nerve force which have been going to the fœtus. The whole system is in a state of tension, and often complications result. Our experience has cost us something, for we have tried to be too artificial, and parturient apoplexy and other inflammatory ills have resulted, and often disastrously. Time gone by we have removed the calf before it was dry, then milked and fed the cow, and watched for the development of parturient apoplexy. Now we leave cow and calf together in a box stall, clean and well bedded. The mother has her offspring with her, and the satisfaction of this condition is a partial relief for the tension. We do not milk immediately, except to test the udder; leave that for the calf. We give a drink of tepid water, and, as there is generally more or less fever, we add a dessertspoonful of saltpetre (pulverized) dissolved in hot water, to allay fever.

For a day or two, perhaps for four or five days, we are careful as to feed. In summer, we can allow access to grass. In winter, clover hay, roots and some bran are, in our opinion, best till the condition of the system becomes normal. For the same time, we are careful as to watering. Twice a day, water from which the chill has been removed is given, and, if the udder is swollen and hard, as it often is, continue to give tepid water to drink till the udder is cured, as much of the inflammation in the udder is intensified and often caused from drinking cold water.

The second day, as a general rule, we milk out the cow if the calf has not sufficiently reduced her udder, and her condition appears healthy. The next day she may be put back in her place in the stable. If the udder is swollen, as before mentioned, we avoid cold drink, occasionally bathe with warm water, rub dry, and apply a liniment of wood alcohol and camphor gum (one pint to one cake), followed by an application of lard or other mild grease to close the pores; or apply camphor oil. We have also used soft soap and belladonna (extract), one quart to two ounces, but prefer either of the former. If the udder does not reduce to normal conditions quickly with this treatment, a dose or two of Epsom salts may be necessary, but only when the system has passed the danger of milk fever.

By the time the cow's milk is fit to use, the calf has learned to drink, and the cow is satisfied to be separated from it.

If the weather in summer or early autumn be wet, do not allow the newly-calved cow to remain out in the rain or lie upon the wet ground, until the system becomes thoroughly normal.

Our results are now satisfactory from this treatment. We have had no milk fever for five years, have good strong calves, and few ailments in cow or calf. C. M. MACFIE.

Middlesex Co., Ont.

The Care and Management of the Dairy Cow at Time of Parturition

SECOND-PRIZE ESSAY.

The calving season is the most critical period in the life of the dairy cow, and a little care and attention bestowed on her at this time will be amply repaid by future usefulness.

During the last few months of gestation there is a decided strain upon the cow, and she needs rest and nourishing food to meet it. I usually try to allow a period of rest of from seven to nine weeks, and during that time I supply her with a liberal amount of flesh-forming foods. I find that the cow in good condition at time of calving produces a more healthy calf than the poorer cow, and is herself less liable to the ills that sometimes attend and follow parturition.

The feeding of corn to a cow previous to freshening is considered dangerous by a great many, but I have found a liberal allowance of silage, together with oat chop, bran and a few roots, to be very satisfactory. However, with these rations, discretion must be used, lest the cow become overfat, or her udder develop too rapidly. Daily exercise is also absolutely necessary. The corn-fed cows, I find, produce large, strong progeny, and are themselves in the proper condition to give a large flow of milk the ensuing season. About twelve days before calving I change her feed, dropping the silage, and giving only clover hay, oat chop, bran, and a little oil cake. These foods, being of a laxative nature, I consider no other purgative necessary before freshening.

Several days previous to calving, I place the cow in a box stall, comfortably bedded, where there will be no cold drafts, but abundance of light and pure air.

I always try to be with the cow at calving time, as she sometimes has difficulty from malposition of the fœtus or other unnatural condi-