

have been made, including the provision of a spacious laboratory, an incubator for the development of ferments, and a powerful microscope. A workshop has also been provided, in which the students have practice in plumbing and opportunity to study the mechanism of an engine by taking it apart and putting it together, etc. The Western Dairy School is doing a good work, and fills an important place in the education of farmers' sons and daughters in practical lines.

#### Care of Cows at Calving.

The discussion of the above subject in this issue by practical breeders will, we are sure, be of interest to a very large number of our readers. The losses sustained every year by dairymen owing to what is known as milk fever and other troubles incident to parturition are in the aggregate very large, and their prevention is of very great importance. Many different theories with regard to the nature and causes of milk fever have been propounded and many different remedies prescribed, but it is doubtful whether any of them are entitled to entire confidence, and the best of them, even when successful in effecting a recovery, are liable to leave effects in some cases which discount the future usefulness of the cow. If ever the maxim that "prevention is better than cure" holds good, it is in this connection. The practice not infrequently adopted, of starving a cow or of putting her on limited rations of dry feed only, is, we are persuaded, a grave mistake, as this course is almost certain to cause constipation of the bowels, which is the greatest danger to the health of the cow and to a safe and successful parturition.

The rule adopted and strongly recommended by some breeders, of administering purgative medicines to overcome this difficulty, while it may be necessary after such a course of feeding, is, to say the least, an unnatural process, and one which must tend to materially weaken the system of the cow, already heavily drawn upon for the support of the unborn calf, and to leave her liable to chills and the retention of the afterbirth. Some liberal feeders and successful cattlemen, among whom is Mr. Geo. Rice, one of the most intelligent and successful, believe in physic-ing the cow before calving and after; but other equally successful dairymen, among whom is Mr. Rettle, have little, if any, faith in dosing at that period or any other in this connection, believing that by fairly liberal feeding with succulent food, such as roots and ensilage, with a little bran (thus keeping the bowels relaxed), the cow is in the best and most natural condition to safely perform the functions of parturition to herself and her offspring. If these latter are in the right, it will certainly be a relief to know it, for there is always some risk in drenching a cow with medicine, since if she refuses to swallow it, a portion of the dose may find its way into the windpipe and set up inflammation that may cause death. It may seem a simple thing to drench an animal, but we have known more than one case where a professional veterinarian cut short the life of the patient by this process and charged the owner smartly for killing his cow. Great care is necessary that the medicine be given very slowly, in small quantities at a time, and to be sure that it is being swallowed before giving more. It may not be generally known, but is a fact nevertheless, that in milk fever a cow soon becomes incapable of swallowing, the muscles of the throat becoming paralyzed, and at this stage many a cow has been killed by dosing.

We confess to being favorably impressed by the theory of an English writer, quoted in an article in this issue, that the secret of success in avoiding milk fever is in letting the calf relieve the udder of the dam a little at a time for the first two or three days, and not milking it out clean till after that time. This is nature's plan, and we cannot recall an instance of a cow falling a victim to milk fever while nursing her calf. If such has occurred, it may have been owing to having been milked out after the calf has sucked. It is a fact that the full flow of milk does not come till several days after calving, and the greatly-distended udder sometimes seen before calving, and causing alarm, is often owing, not to the pressure of milk, but to a caking of the udder due to other causes, and for this reason it is seldom, if ever, necessary or wise to milk a cow before calving. Cows in range herds drop their calves on the common, and are never milked except by the calf, and who ever hears of losses from milk fever under those circumstances? Udders sometimes go wrong, it is true, but that is more likely to happen some weeks after calving, when the full flow of milk is on, and the calf gets more than enough, causing sickness and a failure to relieve the mother's udder sufficiently to save it. The cow, under natural conditions, licks her

calf dry, and the liquid she absorbs in this process tends to relax her bowels naturally, but many otherwise dairymen seek to relieve her of this worry by taking the calf out of her sight as soon as born, and imagine they are doing a smart thing and improving on the ways of nature. Then they hasten to draw every drop they can from the udder, with the idea that this is necessary to the safety of the cow, while it may be, and probably is, just the worst thing that could be done. Man, doubtless, has improved on nature in some instances by directing her forces, but there are some things in which it is better to let her have her own sweet way.

The ideal place for a cow to calve is, doubtless, the comfortable box stall, but this is not a real necessity, if the herdsman be present at the critical time. She may calve tied in her stall with less worry than in a strange box and away from her usual company, but she should be allowed to lick her calf and to give it its first nourishment from her udder. And while she must be kept in the stable for a few days after calving and given plenty of water with the chill taken off, it is a mistake to let all the other cows out for water and for cleaning of the stables, while the newly-calved cow stands alone, shivering from the draft from open doors and fretting for company. She should be blanketed, and her companion cow kept in with her to keep her quiet.

#### The Cow at Calving.

Aim to feed the milk cow so well that when the time comes to "dry her" she will be in prime condition; in fact, about fat enough for beef. Have her dry about seven or eight weeks, and feed her moderately on a succulent and cooling ration: Clover hay, ensilage and mangels for roughage, and bran or oat chop and oil cake for grain. These are very cooling and laxative in their effects. If the cow stocks up rather much, a dose or two of salts and ginger are useful, but too much physic tends to weaken the cow. Have her in a comfortable and well-bedded box stall a week before calving, and if she is very valuable try to keep watch of her at this time, as a little assistance will often save a deal of time and worry afterward and perhaps save her life. I think the cow will worry less if the calf is taken away immediately, but my usual practice is to let her lick the calf and let the latter get a square meal before I separate them. I only milk before parturition in extreme cases—where the cow is suffering from the excess of milk. The exercise of good care and common sense is the best safeguard against milk fever, garget, retention, etc. I consider salts and carbolio acid the best preventive of these diseases. The Schmidt treatment is the best cure for milk fever, in my estimation. Garget has numerous "sure cures" which are very useful in connection with salts and saltpetre. For retention of membranes and inversion of uterus, have only a qualified man to operate, and use carbolio acid, about 35 drops in some water for a dose, once a day.

Brant Co., Ont.

G. W. CLEMONS.

#### Profit from Jersey Cows.

Herewith I send report of the record in buttermaking of two St. Lambert Jersey cows in the Golden Fawn herd of Cedar Brae farm: No. 1 with her fourth calf gives 43 lbs. of milk per day, sufficiently rich to produce over four quarts of 27 per cent. cream, equal to 19 lbs. of butter in 7 days. No. 2, the first-prize two-year-old heifer at Western Fair last fall, with her second calf, gives 32 lbs. of very rich milk, producing 3½ quarts of cream per day, equal to 16½ lbs. butter in 7 days. This heifer I believe will, by the time she has her fourth calf, come up to her grandam, Nellie of St. Lambert, which gave 70 lbs. of milk per day, making 23½ lbs. butter in 7 days. Those are the kind of cows farmers should aim at having, although they do not make as much beef when old as grade Durham and Holstein cows, many of which do not average for the eleven months more than 5 lbs. of butter per week, if even they do that much.

York Co., Ont.

T. PORTER.

Note.—It will doubtless occur to readers, though it does not seem to have dawned upon our correspondent, that a report of a year's work of the Jersey cows mentioned, or at least of 11 months' work, would appear to be necessary in order to have a fair comparison with the other breeds referred to for that time. We agree with him that it is well to aim to have cows that produce like those mentioned, and although two swallows do not make a summer, nor two cows a herd, the more we have like those whose work is recorded in this letter the better for the dairy-men and dairy interests of the country.—Ed. P. A.

#### Cattle Feeding: Tied Up or Loose?

Much has been written and spoken on this question by those interested in feeding cattle, whether for raising them on the farm or for export, and still the question is as far from being satisfactorily answered as ever. There are, no doubt, many like myself, who have made more or less complete experiments along this line, but the sum total of these experiments has not yet been gathered together and compared, so that a fairly reasonable conclusion may be drawn. For my own information, primarily, I conducted an experiment during the winter of 1900 and 1901, the result of which I now offer through your columns for what it may be worth. The lot of cattle handled under the test comprised 137 head of export steers, of which 51 head were fed loose in box stalls 15 feet square, containing 5 each (with water), and were not let out during the time they were fattening. The other lot, consisting of 86 head, were tied up in the usual way, with water in front of them, and, like the other lot, were not let out during feeding period. In all other respects the two lots were treated practically alike, both as to kind and quantity of meal and roughage given them, with the exception that the lot tied up had nearly one quarter of a pound more meal per day than the other.

An examination of the following table will give a fair idea of the result of this test, better, possibly, than would an opinion expressed by myself. However, I will content myself in this connection by saying that no general hard-and-fast rule can be laid down applicable in all cases. In my judgment, cattle of a nervous or excitable disposition will probably do better tied up than if allowed to run loose in box stalls with or without other cattle, while others of a more docile temperament will do as well in box stalls containing not more than 5 head each. But even in the latter case, success will depend very much upon the manner of their feeding, having reference to the nature and quantity of the feed given them, abundance of water as they require it, together with regular and careful attendance. Every farmer will agree that the attendant should know whether the animals under his care are doing well or not by their actions. The conditions required by the experienced feeder on the part of the fattening animals are perfect rest and contentment, which can only be secured by giving them abundant feed to their liking. The fattening steer fed to his full capacity will be quiet and spend most of his time lying down, whether in a box stall or tied up—in the former case with much more ease and comfort. Such, in brief, is the conclusion I have come to after following both methods some 7 or 8 years. Of course, cattle fed in boxes must be dehorned, and could I not get sufficient dehorned steers for my purpose I should at once do away with the boxes and tie up all my cattle. The practice is now rapidly becoming quite general of removing the nubs or horns when the calf is a week or two old, either by the knife or caustic.

It will be noticed that there is an apparent advantage of one-fourth of a cent per day per animal in favor of the steer tied up. This slight advantage is not equal to the saving in labor in favor of the loose ones, and in my case was largely due to the attendant, who was a more experienced feeder, who devoted all his time to his lot; while, in the other case, the attendant had many other duties to perform.

The feed given these lots consisted of ground oats, barley and shorts, in about equal quantities of each; and for roughage, ensilage, cut clover hay and cut oat sheaves—in about equal quantities by bulk—all mixed together a day in advance, and fed in three meals per day, and all they could be induced to take.

The following is the result in detail of my experiment:

COMING IN.				TIED UP.				GOING OUT.			
Date.	No.	Weight.		Date.	No.	Weight.		Date.	No.	Weight.	
Oct. 26	48	55,000		Dec. 11	7	7,480	in.	Dec. 11	27	38,360	2,184
Nov. 21	1	4,900		Jan. 19	11	14,955	1,172	Jan. 14	11	14,955	1,172
Dec. 29	5	5,320		Apr. 10	8	10,180	1,088	May 5	13	17,810	1,410
Jan. 18	2	2,175		June 17	20	26,415	3,165				
" 21	11	12,914									
" 30	9	10,335									
Feb. 6	2	2,130									
" 18	2	2,400									
Mar. 7	1	1,150									
Apr. 18	2	2,150									
	86	99,401									
Total gain, 16,000 lbs., for 9,327 days.				86				115,400			
1.71 lbs. Meal per day per head, 8.76 lbs.								Average daily gain,			

  

COMING IN.				LOOSE.				GOING OUT.			
Date.	No.	Weight.		Date.	No.	Weight.		Date.	No.	Weight.	
Oct. 29	31	39,105		Jan. 19	13	18,110	1,053	Jan. 14	13	18,110	1,053
Jan. 14	1	1,075		Apr. 10	7	9,275	871	Apr. 10	15	20,540	2,199
" 21	16	18,781		May 5	8	10,510	984	June 1	1	1,500	128
				" 17	7	9,290	1,170				
	51	58,961									
Total gain, 10,261 lbs., for 6,105 days.				51				69,225			
1.60 lbs. Meal per day per head, 8.52 lbs.								Average daily gain,			

Such, in conclusion, was my experience last winter. I will finish this season about 180 head for export, following both systems as above outlined, and have every reason to be well satisfied