## FARMER'S ADVOCATE. THE

keeping quality of the butter-lies in expelling all the moisture possible during the process of manu-

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facture. "Having stated that moisture causes and not prevents 'fishiness 'in butter, it is perhaps as well to explain what, this season, has caused butter to become 'fishy.' There are several causes, the prin cipal of which, however, are :

"Neglecting to aerate the milk when pasture are rank and strong-tasting weeds abundant. "Accepting from suppliers milk that is partly

sour, or, perhaps, just 'on the turn,' separating the cream from that milk and churning it into butter.

"Churning cream at too high a temperature, and neglecting to air the churn during the operation.

"Working, salting, and packing the butter at too high a temperature, frequently 80° and 90°, whereas this work should never be attempted when the temperature is over 60°.

Either of these causes is sufficient to affect the keeping quality of butter; but when all are present, s too commonly is the case, the extent of the 'fishiness' can be better imagined than described. Churning the cream at too high a temperature, and working, salting, and packing the butter at too high a temperature, are practices that exist in too many of our factories. When butter in a heated condition reaches the refrigerating depot at Flin-ders streagt the party used in lining the condition reaches the retrigerating depot at Fin-ders street, the parchment paper used in lining the boxes is almost embedded in the butter, and clings to it in a sticky way, as if it were soft soap. Al-though we chill the butter down to the proper temperature before shipping, we cannot give it that firm, clean and attractive appearance that catcher the eye of buyers. When this class of butter reaches London, practical men can detect 'fishiness' at a glance, and knowing the actual cause—not insufficiency of moisture—this operates against its success in the English market."

Inspection and Branding.—As the Government wisely holds that it is of the highest importance that "Australian butter" shall be a brand synonymous with excellence, and that every box of bad Austra-lian butter damages the sale of the goods, it has determined to be more rigorous than ever in its inspection and enforcement of careful provision for ensuring a good product. In New South Wales the export is in the hands of a few large concerns, and self-interest compels them to exercise the rigor-ous oversight which the Government is attempting to exercise in the other colonies. One point more may be stated respecting the butter boxes. Too great care cannot be exercised in seeing that boxes are made each side of one piece and of sound as well as of well-seasoned, non-odorous timber. Not only does the ill-seasoned wood taint the butter, but sappy wood in ocean shipment or storage at a moderate temperature tends to dry rot or mildew, and this, too, affects injuriously the contents of the box.

## Fresh Cow vs. Stripper Butter.

The impression held by many dairymen and others to the effect that it is necessary to have part of the milk from fresh cows in order to produce butter of good flavor has been fairly conclusively proved to be groundless, at least when the sepa-rator is used, by the results of an experiment con-ducted at the Iowa Experiment Station by G. L. McKay, Dairy Instructor, and C. H. Eckles, Assistant Instructor. Cows that had been milked six consi ered stripp months or mor sort, 15 cows of Holsteins, Shorthorns, Jersevs, and Red Polls, having milked an average of 239 days, made up one lot. The second lot consisted of 18 of the same breeds, having been in milk an average of 107 days. The two lots were fed alike on blue grass pasture and cotton-seed meal. The cream was extracted by means of a separator, and carefully cured in a small vat. Without going in-to details of scoring, etc., it will suffice to give the general conclusions arrived at by the experimenters, which are :-From this and similar experiments, it would seem that the period of lactation has no effect on the flavor of butter; that is, when the milk is han-dled by the separator system. Under a gravity system there may be some difference, as so many dairymen claim, and the following is a possible explanation : The fat globules, as is well known, are smaller in advanced periods of lactation, and when cream from such milk is raised by the gravity process more time is required for the cream to rise than when the milk is from fresh cows whose milk contains globules of much larger size. We have found that cream or milk when kept at a low temperature for some time developes a somewhat bitter flavor. There seems to be an organism which grows at that low temperature and which gives a flavor to the cream and to the butter. It is possible that this is why strippers' milk is generally considered as inferior for the production of butter."

**Common Ailments of Dairy Cows.** DISEASES AND ACCIDENTS PECULIAR TO PREGNANT COWS AND IMMEDIATELY FOLLOWING PARTURITION.

(BY V. S.)

In considering the diseases and accidents peculiar to pregnant cows, it is highly advisable first to consider their general management, with a view to preventing, as far as possible, those undesirable conditions, and also with a view to obtaining the best results from our feed and labor.

At this season of the year our attention should be directed more especially to the condition of our stables. Let us see that they are put in proper con-dition for our stock, and one of the first things to be considered is that it is large enough for the number we have to house.

There is no one portion of dairy stock manage ment, to my mind, requires more consideration than the sanitary condition of our stables. No animals can show good results when kept in an over-crowded, badly -ventilated, and unsufficiently drained premises. Upon the other hand, unnecessary exposure to cold and drafts is just as bad, for the food given under such conditions is then appropriated in supporting and maintaining heat for the body, consequently at the expense of everything else.

Some dairymen of my acquaintance never allow their cows exercise from the time they are tied up in the fall until they go to pasture the following spring. This I consider not a good practice. When animals are highly fed, as many dairy cows are, I consider a certain amount of exercise necessary, if allowed in favorable weather and in good, com-tortable, well-protected barnyards. I do not approve of the idea of cows far advanced in pregnancy being turned out with a lot of young stock, regardless of weather, and allowed to trave twenty, thirty or fifty rods, as the case may be, to a creek or spring to drink in the winter, as they are liable to receive injuries from running, and are more than liable to drink far too much cold water, for probably yesterday was so stormy that they preferred to go without a drink, and to-day they are so thirsty that they are liable to overdo the matter. Those far advanced in pregnancy are liable to abort as the result, or if milking, are dan-gerously exposed to a chill and an attack of mam-

itis (caked udder). In connection with cows being exercised, there is one matter that too many overlook, and that is the habit of herding cows with a dog. To my mind the average dog on a dairy farm is a very ex-pensive luxury, and if I may be allowed to wander for a moment from my text, I will just enumerate what I consider accidents due directly to the what I consider accidents due directly to the effects of cows being driven by dogs: Garget (mammitis), bloody milk, abortion, failure to get in calf (supposed), which in reality is in many cases abortion in the earlier stages of preg-nancy, and which escapes notice. Therefore it pays to take a little more time and drive the cows ourselves, and have no loud, boisterous, and rough attendants which make vicious and nervous animals out of what would otherwise and ought to be quiet animals.

Much has been written and said regarding the way animals ought to be fed in order to obtain certain results; and, unquestionably, some diets produce more milk than others. This article is not intended to advance ideas upon principles of feedNOVEMBER 2, 1896

Thus it is that it is almost, if not quite, unknown in hilly pastures or when animals are freely ex-ercised in the summer months.

The direct causes of mammitis cannot be justly laid down as being wholly produced by overfeeding or too rich a diet, yet I feel justified in saying that it produces conditions which within themselves are direct producers of this malady, namely, causing a great flow of milk and overtaxing the gland, which first becomes congested. And if very prompt and persevering measures are not adopted, we have a very serious condition on our hands. In fact, the very last case of mammitis, and one of the worst that came under my notice, was, without a question of doubt, brought on by overfeeding on unthreshed millet.

Keep the cows in a strong, healthy condition, avoiding, as far as possible, undue fatness for a period of two or three months before calving, if they are heavy milkers. Moderate exercise daily is very beneficial, and never allow a cow to dry up that has had an attack of parturient apoplexy. I speak of the advisability of avoiding this dis-

ease more than any other simply because of the gravity of its nature and the possibility of avoiding it, for I consider it one of the easiest prevented and most treacherous and fatal diseases, when once established, with which the dairyman has to contend.

In summing the matter up, provide your cows with good, comfortable, light, well - ventilated stables, with good food, pure water; and to make the best use of these when provided, have none but the best attendants procurable. If you will allow me access to your cow stables

and barnvard when your stock is in, I will tell you pretty nearly what kind of a man you have attending your stock, even though he is from home. Let me know the disposition of your man and I will tell you the disposition of your stock in three months from the day of his arrival.

[TO BE CONTINUED.]

## The Production of Milk for Winter Buttermaking.

## BY JOHN B. MUIR.

In the production of milk for winter buttermaking, the utmost care is required on the part of the dairyman in providing himself with a first-class herd of cows, in supplying them with the cheapest and most economical food for the production of milk, and in giving them the proper care and treatment. He must also give attention to the care of the milk, so that it will reach the creamery in the

best possible condition. Selecting the Cows.—To secure a good herd of cows, the dairyman must use his good judgment in selecting and breeding. The most important point in selecting is the intelligent use of scales and Babcock tester. Every dairyman should frequently weigh and test the milk of every cow in the herd. If you have not a tester, take a bottle or pint gem jar for each cow, and immediately after milking stir well, then put about two ounces in the jar repeat for at least four milkings. Take the samples to your buttermaker and he will gladly test them for you. From my own experience in managing one of the best factories in the Dominion, I can strongly recommend this plan to both patron and maker. The patron is enabled to weed out unprofitable cows, and the maker is rewarded by getting more and better milk from the good ones. After carefully testing and selecting the best cows in the herd, by breeding them to a sire of some dairy breed of good individuality and raising the calves, a first-class herd will soon be the result. For winter milk the best time to have the cows come in is October or November. Care of the Cows-For the economical production of milk during the winter season it is necessary that the cows be provided with warm, comfortable stables, and those having frame stables, with some boards loose or off, and big cracks for the wind to blow through, causing the cows to hump their backs and shiver, will do well to remember that 'a pine board makes good feed for a cow in the cold weather," meaning that protection from the weather saves food, while exposure calls for a greater consumption of it. After battening up all cracks, replacing broken panes in the windows with good ones, and making everything snug and warm, make the cows as comfortable as possible by giving them a nice dry bed to lie on and keep them clean. This can be best accomplished by the use of the model cow-stall recommended by ex-Gov. Hoard. I speak from experience, as I kept a cow all last winter in a stall of that description, tied with an ordinary web halter, and she was just as clean when turned out in the spring as when put in in the fall. Clean Stables.-It is of the utmost importance that the cows and stables be kept scrupulously clean, as we can not expect to make fine flavored butter from impure milk, and it is impossible to have good, clean flavored milk from dirty cows and stables. If every farmer would only spend a few minutes daily grooming his cows with a coarse broom brush, he would be well repaid for his labor by the increased thriftiness of the cows, resulting in a saving of feed and a larger supply of milk. Those who have stables so arranged that they cannot keep the cows as dry and clean as they should be could help matters very much by clipping the hips with a horse clipper, which will prevent the filth from sticking in the hair and accumulating. Food for the Cows.—All live dairymen, especially those intervented in the dairymen the



The Elma cheese factory, which ranks among the largest in Western Ontario, is to be carried on as a winter creamery this season.

The British Dairy Farmers' Association has decided to make their annual excursion next year to Scandanavia instead of to Canada.

The Western Ontario Dairy School at Strathroy will reopen for the present season on Nov. 25th, with a full staff of instructors. Short and long courses, as desired.

ing, yet in such an article it would be very incom plete if this portion of our management were omitted.

One of the most fatal diseases with which we meet in cows at calving is due largely to the manner in which such animals have been fed. I speak now of parturient apoplexy, or more commonly called, or miscalled, milk fever. Prof. Williams says : The ex-citing causes may be looked for in the act of parturition itself, mistake in dietary, and the season of the year. In Fleming's Obstetrics we note the fol "Plethora, there can be no doubt, exercises a great influence in the production of the disease. Thus it is chiefly among the well-fed cows, particu-larly those kept for milk in the vicinity of large towns, and which seldom or ever leave their stables. and are abundantly nourished immediately before calving, that parturient apoplexy prevails most severely and extensively; in such conditions as not to be wondered at. It is true that it may attack milch cows in moderate or even comparatively poor condition, but then it will be found that their hygienic management has been at fault.

In the same chapter he uses these words: "It has also been remarked that a uniform or even abundant diet is less dangerous than an abrut change from scarcity to generous allowance." So in sum-ming up the opinion of such authors, and from observations, some special attention in the way of diet is very necessary in the management of deep milkers. Food should be of good quality and of such a character and quantity as to not induce too great a plethoric condition previous to calving and for a period of say ten or fifteen days after.

It is quite true that if a cow passes over the third day safely she is considered out of danger, as far as this affection is concerned, but I have seen cases develop after a much longer period; therefore, to be safe, avoid fleshing up the cows too much until after they have calved. Permanent confinement in the stable also acts in a similar manner to abundant and stimulating food by inducing plethora and a relaxed condition of the system.

those interested in producing milk during the