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stead of ly, and tness of LACK OF KNOWLEDGE.

First: as regards ripening cream. Cream that is over-soured is a common thing in the dairies of Ontario, a fact which indicates that the ripening of cream is not, in all cases, well understood. A really fine, quick, rich-flavored cream is something to be desired. Cream that ripens for two or three days cannot be used for the production of highclass butter. Twenty-four hours is the ripening limit set by the best authorities. A mild acidity is

Secondly: regarding temperatures and their effects. While gathering, preparatory to ripening, cream is best kept sweet, say below 50° F. This is a stage when much cream is spoiled. While ripening cream, avoid very high temperatures, as these

tend to make a soft, poor-bodied butter.

Thirdly: lack of knowledge of the effects of non-uniform cream, which may be thus summed up:
Less butter, as the thorough churning of the cream depends largely upon the uniformity of fermentation that pervades the mass. A less excellent but ter results also, since if cream is not uniformly ripened, the butter will not be of uniform flavor and keeping quality. Specks of toughened cream are sometimes found in butter, because the cream is not frequently stirred, and has not been strained

before churning. Fourthly: pertaining to objectionable flavors. Having churned a goodly number of various kinds of cream the past summer, our experience has shown us that bad flavors in cream always result in more or less difficulty in churning. In some cases the cream will not "break," or, having broken, will not "gather." Generally, there is considerable extra loss of butter-fat in the buttermilk. In such creams we usually require to churn two or three degrees higher than ordinarily. Of course the butter is very

Fifthly: as to the effects of feed, salt and water. Confining cows to one class of coarse fodder, or to one coarse fodder and one grain food of similar composition and effects, usually results in difficulty with the churning of cream. We have known cases where the cream from cows fed on corn stover where the cream from cows fed on corn stover solely could not be churned. Timothy hay alone solely could not be churned. Timothy hay alone has resulted similar y, so has a ration of coarse fodder and ground wheat. Variety of fodder is absolutely essential for the maximum production of high-class cream. Cows that have not salt at pleasure, will produce a flavorless, insipid cream, that will frequently give trouble in churning.

Butter of poor quality and less in quantity will surely result from the churning of cream from cows drinking bad water.

drinking bad water. Truly, the cream that makes the broadly-educated, painstaking dairyman draw an inward sigh of satisfaction, is only secured by undeviating attention to every in and out of the work, from the character of the fodder used till the cream is poured

NOTE.—We would be pleased to have the testiinto the churn. mony of readers who have been successful in making butter of unexceptionable quality while feeding turnips, rape or the other foods on the list which "F. J. S." proscribes.—Ed.]

How Persons of Moderate Means Can Establish a Money-making Dairy Herd.

BY MRS, E. M. JONES, BROCKVILLE

If 2 and 2 make 4, why will not 4 and 4 make 8? I asked myself this question after reading the very extraordinary letter of your correspondent (Mr. Elder), who advises farmers not to keep thoroughbred cattle, but to keep grades. Had this gentleman based his argument upon other grounds, I could have understood it better. To explain: In my little book, "Dairying for Profit," that has had such wonderful success, I have had but one aim and object, and that is to help farmers and their wives (and more especially those who have small means)to double their profits, while at the same time lessening their labor. My book was not written for the rich man, who has means to gratify every capriceit was written for the "poor man," but more than all, for the poor man's wife; to be a real help to her, so she could get ahead in the world and lay by a little money for herself and children, and get out of debt, and be comfortable and independent. It has been the earnest work of my whole life to help my fellow-women, and my heart is just full when I think of the unceasing stream of letters pouring in upon me, saying how I have helped and encouraged them and the stream of them, and thanking me with all their hearts. And as long as I live I will be true to the trust they repose in me, and advise them to do just what I would do myself if beginning life again with my own

Referring to my book, you will see that I advise living to earn. them to get a pure-bred male, and grade up their herds, as the first step in the right direction. But do I say to stop there? Far from it. I say keep on grading up until you have as near full-bloods as you can get, and the nearer the better. Why do! not advise them to get registered females also at the start? Because I am working for the interest of the poor man, and while the full-blood male sires many calves in a year, a female gives but one. Therefore I say, "Don't put all your eggs in one basket just at first, while you have so few but go slow. If you take every cent you have to buy a registered Jersey heifer or cow, costing from feeding.

\$100 to \$200, of course she will be the best investment—bar accident. But if she gets killed on the railway, or burnt up in your barn, or dies of milk fever, the money loss is too heavy for you just now, till you are in a position to afford it. Be content with the grades at first, but only as a stepping-stone to better. Then, when you have felt your way a little and can do so with prudence, buy a registered female, even if it be only a little calf, but be sure it is good. The worst thing one can own is a poor cow. You can't afford to keep her, and you can't honestly sell her. She can only be made into beef. Better pay a reliable dealer \$100 for a fine butter-bred heifer than take a poor one at \$5. Now you have a pair of registered cattle, and go on increasing the number, both by breeding and purchase, as you are able, till at last the grades are sold and all the herd registered.

The advantages of registered stock are: 1st. As rule (though not always) they will produce more in the dairy, and of far finer quality, than grades. 2d. Their calves will sell for six times the price of grades.
3d. Good thoroughbreds will seldom fail to give calves as good and better than themselves, while far less dependence can be placed on grades in this matter. 4th. There is a satisfaction in a fine herd of thoroughbred cattle that can only be appreciated by those who have felt it.

The only drawback to them is that in case of accident or death the loss is greater than with common cows, but by not going ahead too fast, and by taking every care and precaution, this risk becomes almost nominal. This is my honest advice This is the conclusion, after a whole life spent in dairying, and after attaining a reputation and success that are the pride and glory of my life.

But it is quite another thing to say: don't keep

thoroughbreds because they are too delicate. I do not think any statement was ever made that is so erroneous, and so damaging to the best interests of this great agricultural country. If a pure bred animal is more delicate than a scrub, then a halfbred one is also more delicate, though in a less degree. So why use good blood at all? What is the object? Fortunately for us, the reverse is true. A thoroughbred will not stand abuse and yield a profit under it, but (and on this the whole thing turns) neither will the scrub. Why is it that some farmers so often mourn because they "have to" keep cows, and call them a "necessary evil?" Simply because they starve and abuse them, and get in return a little poor milk and butter for their table, and a little still poorer manure for their land. Believe me, the scrub is not one bit hardier than a good, healthy pure blood, and she can run you into debt and eat up the profit of other things just twice as fast, if you only knew it. One reason why I have been enabled to be of some use and help in dairying is this: That my methods are literally those of the farmer. My cows are not petted or pampered, but they are humanely cared for and fed, and they pay me well. I have had farmers and their wives come to see my cattle with hesitation, and say: course we can't keep them like you do, but we thought we would come and see." Then, when I take them to the barn, they are simply amazed! No blankets to the parn, they are simply amazed: No mankets on the cows; no stove in the barn; no costly fixtures, but everything of the very plainest. Everything to pay. Gradually my visitors expand into delight, and say: "Well, now, this is something like it, and we could do this ourselves," and they feel perfectly at home and happy, and are "so glades." like it, and we could do this ourselves," and they feel perfectly at home and happy, and are "so glad they came." This it is that has made my place an object lesson. This it is that has given the whole value to my life work. One word more as to the delicacy of thoroughbred cattle. My famous old cow, Massena, 651 lbs. butter and 8,000 lbs. milk in one year has lately dropped man a fine heifer solf. one year, has lately dropped me a fine heifer calf, and is now giving nearly 40 lbs. milk a day, and yet she will be nineteen years old next March! Who yet sne will be inneteen years old next march: will can beat it? Maud Melinda, sixteen years old, gave me a fine heifer last spring, and milked 40 lbs. a day for a long time after calving. Princess, one of my best yet, is thirteen years old, and Lilium Excelsion, now eleven years old, can turn off her Excelsium, now eleven years old, can turn off her 17 lbs butter a week, and none of these have been dry in years. One thing I am curious to know. If none of us kept stock like this, where is your correspondent going to get his bull to raise grades?

As to whether my advice is good, I leave it to the farmers to say, and by their decision I am willing to

A Milk Fever Preventive.

Of all the disorders that invade dairy herds none is more dreaded than milk fever or parturient apoplexy, not only because of its fatality, but for the reason that its victims usually are the more highly developed and valuable cows. As a rule 'remedies" are ineffectual. Dairymen and breeders have come to place greater reliance upon preventive measures, such as the exercise of greater care in feeding prior to calving. One course highly recommended is to give for a couple of weeks before calving, one quart of linseed jelly twice a day, mixed in the food, a plan that is said to obviate the giving of physic or putting the cow on a starvation allowance. The mode of preparing linseed jelly is to put the seeds in a vessel with water, and when brought to a boil allow it to simmer for a few hours. cooling it forms into a jelly, which is mixed with

We would be pleased to receive a statement of the food as mentioned. the testimony of readers who have had experience with this or other simple precautionary ways of Dehorning.

In the FARMER'S ADVOCATE for November 15th, in reply to a correspondent, directions were given as to the best time and manner of performing the operation of dehorning. The accompanying illustration from the Australasian indicates the parts involved:

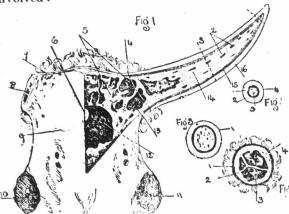


Fig. I.—1. Position for "Tipping." 2. Sections of Blood Vessels. 3. Position for Operation of "Half Horning." 4. Position for Operation of "Dishorning." 5. Plates of Bone. 6. Opening for Exit of Spinal Cord. 7. Skin. 8. Left Horn Removed. 9. Bone of Forehead (Frontal Bone). 10. Left Orbit. 11. Right Orbit. 12. Cavity for Brain (by actual measurement, 2) in. from Position for Operation of "Dishorning." but differing in different animals). 13. Cavities (Sinuses) of Skull (filled with air and opening into the nasal cavity). 14. Horn Core (an insensitive structure if cut in a normal state of health, but like all bony substance, extremely painful when in an inflamed or diseased condition). 15. Sensitive Layer of Corium corresponding to true Skin. 16. Insensitive Horn.

Fig. II.—1 Horn. 2. Sensitive Layer of Corium. 3. Horn Core. 4. Section obtained by "Tipping."

Fig. IV.—1. Skin. 2. Bone. 3. Sinuses or Spaces filled with Air. 4. Section obtained by "Dishorning."

QUESTIONS AND ANSWERS.

[In order to make this department as useful as possible, parties enclosing stamped envelopes will receive answers by mail, in cases where early replies appear to us advisable; all enquiries, when of general interest, will be published in next succeeding issue, if received at this office in sufficient time. Enquirers must in all cases attach their name and address in full, though not necessarily for publication.]

Veterinary.

AN AILING JERSEY BULL.

J. B. P., Fairmede, Assa. - "I have a pure Jersey bull two years old, very much in-bred. He passes quantities of bloody matter, some days worse than others. It commenced last summer. I noticed it first after covering a cow; he fell and seemed to sprain himself. Sometimes he passes little balls of matter about the size of marbles, at other times it is bloody matter, sometimes clear, other times mixed with dung. He seems healthy; has a splendid appetite, but seems to drink more water than the others."

[The condition of your bull may be the result of the fall he sustained, or it may be due to a catarrhal state of some portion of the alimentary canal. Give a moderate laxative, such as one and a-half pints of raw linseed oil, and after it has operated, give morning and evening in mash for ten days: hyposulphite of soda, one ounce.

W. A. DUNBAR, V. S., Winnipeg.] WORMS.

Subscriber, Dunmore: - "I have a half-bred Clyde mare, four years old, badly troubled with worms; they are from one and a-half to four inches worms; they are from one and a-nail to four inches long, pointed at the ends, and cling to the rectum very much when excreting. I call them pin worms. Have tried many remedies without success. Can you recommend some powders that I can put in the mare's food, as she is an awkward animal to give medicine to?" animal to give medicine to?"

Give your mare, morning and evening, in mash, for one week: powdered areca nut, four drams; powdered nux vomica, half a dram. Give the following injection, per rectum, three times a week: raw linseed oil, half a pint; turpentine, one ounce; warm water, two quarts. W. A. DUNBAR, V. S.

Miscellaneous.

CELERY GROWING.

A Subscriber: "Can you or some of your Ad-VOCATE readers give me information on the best method of growing celery. I have heard it stated that the secret of growing good, stalky celery—that is, having a plant with a large number of stalks lies in growing the plant properly while they are small. I have a black muck bed, which is always damp, not wet, and I wish to plant it with celery next summer. I want to grow early celery. Should I make a hot-bed this fall? How should I make it? Does it make the plants more stalky to shear the

tops off when they are small?" "Subscriber's" soil should be equal to the best for celery growing. It is quite true that much defends upon the early life of the plant to insure a successful growth. It is well to sow the seed in boxes about the middle of March or first of April. A box about five inches deep answers very well. The boxes should be filled within an inch of the top with good garden soil. That last put in should be sifted and firmly pressed down. Now, sow the seed