

PROFITABLE DAIRYING

By HUGH G. VAN PELT
Dairy Expert Iowa State Dairy Association

Pure Bred or Grade Cows?

Many who start in the dairy business with dairy cattle begin at once with pure bred cows of one or the other dairy breeds. There are distinct advantages in using pure bred dairy animals in that there is always a ready market for the offspring. Again, in starting the herd with pure breeds the farmer or dairyman can better acquaint himself with the individual merits of the cows by giving due study to the pedigrees which illustrate their breeding. The only objection to starting with pure breeds is the matter of first cost, and as a rule there is not a great difference in the cost of cows that are pure bred and those of nearly the same individual character that are only grades. From the standpoint of milk and butter-fat production there is no doubt but that there are grades that produce equally well, but from the standpoint of building up the herd in such a way that a demand is created for the offspring it is necessary that the cows be pure bred and that we have pedigrees and registry papers. As a rule it is more advisable and less expensive for the beginner in dairy to get his information and education from grade cows which cost less money. Later, or perhaps at the same time, it is advisable to buy one or two or three extra good pure bred heifers or cows and from them build up a pure bred dairy herd while depending upon the grades to furnish the dairy products. One cannot be too careful at this stage as much of his success rests upon the foundation herd. If grades are purchased they should be of the best character, and although not pure in their breeding, they should be well bred. They should be selected for the specific purpose of producing dairy products. Experience has taught that with the dairy function is to be found a certain form. The typical

have a well developed blood circulatory system in order to transport the nutrients which the digestive apparatus takes from the food around to that portion of her body where it is converted into milk and butter fat. The process of taking up the food nutrients after digestion, by the blood, is termed assimilation. This is one of the all important considerations in selecting dairy cows and is probably one of the chief differences between dairy cows and those bred for other purposes. This is indicated also by the condition of the hair and the hide, whether soft and pliable, or hard, harsh and wiry. It is also indicated by the veins upon the udder and the large mammary or milk veins passing from the udder forward and entering the abdomen at small orifices which are termed milk wells and passing from here back to the heart and lungs for purification and to be pumped back again past the digestive apparatus to be loaded up with more nutrients. If this circulatory system is dull and sluggish or carries the nutrients to other parts of the body rather than to the udder or the milk factory, the cow is naturally of an unprofitable kind. It may be readily noted on the common cow or the beef cow that the mammary vein is, as a rule, very small; in fact, about as large in diameter as a good sized lead pencil and very short in its length from the udder to the milk well. Never are these cows large producers of milk or butter fat. On the other hand observe the highly developed special purpose dairy cow, and it will be noted that the vein on each side of the body is not only large in diameter, about the size of the wrist, but is very tortuous, extends far forward and instead of the entire blood flow entering one milk well, there is often from two to five



Good Well-Bred Dairy Calves Worth Raising Well.

dairy form is inclined toward the wedge shape; that is, from whatever point of view the observer looks at the cow, the form which meets his eye is that more nearly conforming to the shape of a wedge than to the shape of a rectangle. In most considerations, in fact, the dairy cow differs extremely from the beef cow. In selecting a dairy cow we should bear in mind that there are five distinct functions that must be given due consideration, that are absolutely necessary if the cow be useful on the farm.

Five Requirements of the Dairy Cow.
In the first place, of course, she must live and in order to live under the conditions of environment in which most dairy cows are situated, namely, to be stabled for six or eight months out of a year, and oftentimes in barns which are more too well lighted or ventilated, the cow must have a good constitution. Constitution is indicated by a large, distended nostril, bright eye and great depth through the chest and heart girth. Secondly, she must have large feeding capacity. The only use to which a dairy cow is put is to convert the feed which she consumes into milk and butter fat. If she does not have the power of consuming a large amount of feed she will not have the power of producing a large amount of milk. Given two cows, one of which has the capacity of consuming twice as much food as the other and converting an equal percentage of the foodstuff consumed into milk and butter fat, it can be easily seen one cow is worth more than two of the other. Those things which indicate large feeding capacity are large mouth and a deep, long barrel with well sprung ribs that are far apart. This indicates largeness of capacity, but more is necessary; the digestive apparatus must be powerful and this is indicated by the quality of the hide and hair found by the touch. If the hide is hard and stiff and the hair harsh and wiry, it is an indication of weakness of digestive apparatus. On the other hand, if the hide is soft and pliable, much like a kid glove, and the hair soft and silky, the indication is that there is sufficient power of digestive apparatus to handle the feed which is stored in the great capacity in a short time, and the cow is ready for more.

In the third place, the cow must

have these wells on each side of the body. Facts demonstrate that cows with these large mammary systems are, as a rule, extremely large producers, while those with small veins are likewise very small and unprofitable producers of dairy products.

In the fourth place, the dairy cow must be a worker, which is indicated by her nervous temperament, which may be defined by a bright, prominent, placid eye, lean appearance, demonstrating that the food nutrients have been converted into milk and butter fat rather than into beef to be placed over the back and ribs. The cow with a well defined nervous temperament is always busy. In the summer time when she goes to pasture in the morning she works diligently all day and returns at night with a full udder. After being milked she returns and works in the same diligent manner until morning; but the cow with a dull, sluggish eye, so often found in beef steers, and carrying an excess of fat, can, as a rule, be found lying in the shade and resting most of her time day or night, and as a result she has very little to give to her master at milking time.

Ability All Important.

As a fifth consideration, the cow must have in addition to these preceding essentials the ability of producing milk and butter fat and, of course, is determined largely by the size, form and texture of the udder. This portion of her make-up must be large in order to have capacity and must gain in size by length and breadth rather than by depth. The perfect udder is one that attaches well up behind, that extends far forward and is broad in its dimensions. An udder that is short, narrow and large because of the fact that it is pendulous and hangs down from the body is not to be desired, because, as a rule, the circulation of blood through such an udder is poor and, furthermore, such udders are the ones most conducive to gaunt and spoiled quarters from one cause and another. In addition to size, the udder should be well formed, flat at the bottom and carried in a straight line from the rear forward in such a way that the front quarters are developed to a great degree as are the hind quarters. As a rule common cows give a larger portion of their milk from the rear quarters of the udder and this is likely the natural way for cows to

give milk, but through the work of the breeder we have many cows at the present time, in fact, most of the pure bred dairy cows that give an equal amount of milk from the front quarters. Very important also is it that the texture of the udder be of good quality. It is not uncommon to find cows with udders almost perfect in size and form that give very little milk and this is due to the fact that texture is lacking. The udder is beefy and, consequently, just as large after being milked as before. Good texture of udder is determined by the handling qualities. If hard and thick and resistant to the touch of the hand, then in most cases it is beefy and not conducive to large production. If soft and pliable and elastic, covered with fine, soft hair and permeated with blood vessels apparent to the eye of the observer, it will be found that at milking time the udder is large and distended in all proportions, but collapses after the milk has been taken from it in such a way that it has much the same appearance as a dishrag. Then, when she returns to her food the udder at once begins to expand, being filled with milk-making nutrients and is again ready to empty its great contents at another milking hour.

Now, after one has started the dairy herd he should bear in mind that the great problem which presents itself is the one of building up and bettering the herd at all times instead of producing animals that are less profitable or poorer in their conformation than their mothers. There is only one way to bring about improvement and that is by the careful selection of sires and by properly raising the offspring by feeding and caring for them with the best possible methods. It is never advisable to use a grade or a scrub sire no matter whether the cows be pure in their breeding or only grades. True it is that many grade bulls are as good individually or look to one as being as good as any pure bred sire, and in many instances it is true that many grade bulls can be found that, speaking from the standpoint of individuality, are superior to the large majority of the pure bred bulls obtainable. However, one is always uncertain as to the outcome of his breeding operations when using a sire whose pedigree is not known. It is not enough to know the character of the sire and dam of the bull at the head of the herd. It may be and often times is the case that a grade bull may have a most excellent mother and be well sired and still the results of his use be the greatest of disappointment due to the law of atavism or reversion, which means simply that the offspring may trace back through the sire and dam, grand sires and grand dams, often back several generations, to some animal that was the most veritable scrub, and, consequently, the offspring would be much poorer than any of the other ancestors. An illustration of this is that Aberdeen Angus cows, pure in their breeding, sometimes have red calves. This is due undoubtedly to the fact that the Aberdeen Angus breed of cattle originated scores of years ago from a foundation of red animals and, although at the present time the largest percentage of the offspring are jet black, with scarcely a white spot on them, some of the calves are born red.

In addition to the pedigree that indicates large production in all the maternal ancestry, the individuality of the bull must be of the type desired in the offspring. He must give indications of prepotency and masculinity, have a strong constitution, capacity, circulatory system, nervous temperament or disposition, and the indications of milking ability described for the selection of cows. Too much attention can never be given to the selecting of the head of the herd and the fact that so much carelessness has in the past been used on the dairy farm in this particular regard is the reason why dairy herds at the present time do not produce more largely on the average and more profitably than they do. This is well illustrated by the fact that in the neighborhood of the very best breeders of bred dairy cattle we find the best farm dairy herds in the world due to the fact that these breeders have sold or loaned to their neighbors bulls with the prepotency and highly developed dairy breeding behind them that rendered them useful in building up the herds to their present standard. As a result of this usage of good sires for several years past these dairymen are selling their cows and heifers for extremely high prices. In many instances for grade cows and heifers from \$75 up to \$150 a head. As a matter of fact, there is only one way of securing good profitable dairy cows at the present time without paying extremely large prices for them, owing to the great demand for good cows, and that is by the use of good sires. As a rule most farmers have cows that they milk and many among them are profitable. By sorting these out, by using the Babcock test and scales and keeping them as a foundation herd, using only the very best of dairy sires, retaining the calves and growing them well, it is surprising how quickly the production of the farm herd may be doubled and then in the future doubled again and so on, depending entirely upon the character of the sire used and the methods employed in raising the offspring. It is possible at this time to buy good, high-grade cows capable of producing from three to six hundred pounds of butter in a year, but these kind of cows are very expensive and unless one is careful in selecting them he is liable to bring upon his farm different diseases, such as abortion, tuberculosis and many of the other diseases to which cows are subject.

The first day he fished he caught 40 pickeral which he sold for \$4.90, the largest weighing two and three-quarter pounds. The second day he caught 26 pickeral weighing 28 pounds, and during December he caught 135 pickeral, besides attending school, not missing a day.

He was off the ice in January and February on account of cold weather, catching 45 pickeral during those two months. From March 5 to March 11 he caught 160 pickeral and in a single week he made \$12.50 fishing.

REPAIRING AN OLD CHURCH

Celebration to Be Held in the Karlskirche, Vienna, Made Famous by Plague.

Vienna.—The famous old Karlskirche, or Karl's church, erected here as a thank offering after the cessation of the great plague of two centuries ago, is undergoing extensive repairs. The work is being done in preparation for a great celebration.

The church had its origin in much the same way as the Oberammergau Passion Play came into existence.



The Famous Karlskirche.

When Bavaria was visited by a pestilence peasants in the mountain village registered a vow that if they were spared they would perform a religious play every ten years.

It was nearly one hundred years later that parts of Austria suffered from a plague. When it subsided the Viennese resolved on the construction of a great temple. Work on the Karlskirche began in 1716 and was completed 20 years later. The celebration now being planned will be held in 1916. It will be in the nature of a thanksgiving service, commemorating the completion of two centuries in the life of the parish.

The church is a lofty building, surmounted by a huge dome. Two bell-towers, each resembling Trajan's column, and each 108 feet high and 13 feet in diameter, flank the portico. Effects of the plague are represented in relief in the tympanum.

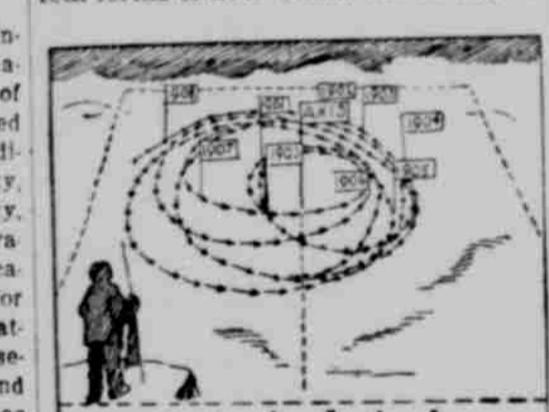
The building occupies a commanding position on an elevation in the south-central part of the city. The dome is now encircled by scaffolding while the decorative material of the exterior is being replenished.

SAYS NORTH POLE WOBBLES

Prof. Garrett P. Serviss Declares "Big Nail" is Seldom Twice in Same Place.

New York.—It will be news to many people that the north and south poles are seldom twice in the same place. Prof. Garrett P. Serviss states that the earth wobbles, and consequently the position of the poles is constantly shifting.

That this is the case is proved says the professor, by the fact that the polar regions were once inhabited by tropical forms of life. From this he argues



that the two poles were once on the equator, and the equator once ran through the two poles.

The fact that the earth's axis is constantly shifting means that neither of the poles remains always in the same place. Thus there is a possibility that one expedition will find the pole at one place in one year, and another will find it in another place the next year.

Our map shows Professor Serviss' estimation of the various positions occupied by the north pole during the last ten years.

BOY MADE \$55 BY PICKEREL

Thirteen-Year-Old Lad of Worcester, Mass., Is the Champion Fisherman.

Worcester, Mass.—Leo Addison Handy, thirteen, of Rutland, is the champion boy fisherman here. From December 10 to March 11 he earned \$55 fishing for pickerel, besides the fish he caught for family use. He is a son of Mr. and Mrs. Fred L. Handy and spends his spare time fishing. He has a line on the best places and knows where to go the nicest bait. He caught 280 pickerel between the above dates, besides catching all the shiners he needed for bait.

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He was off the ice in January and February on account of cold weather, catching 45 pickeral during those two months. From March 5 to March 11 he caught 160 pickeral and in a single week he made \$12.50 fishing.

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Back to the Tall Timber.

Alfred—Are you going to pass your vacation at the seashore?

Gilbert—No, thank you. It's the woods for mine this year.

Alfred—Don't like the shore, eh?

Gilbert—Oh, I like it well enough, but it's too risky. I passed my vacation there last year and had several narrow escapes.

Alfred—From drowning?

Gilbert—No; summer girls. Seven of them proposed to me.

Casey at the Bat.

This famous poem is contained in the Coca-Cola Baseball Record Book for 1910, together with records, schedules for both leagues and other valuable baseball information compiled by authorities. This interesting book sent by the Coca-Cola Co., of Atlanta, Ga., on receipt of 2c stamp for postage. Also copy of their booklet "The Truth About Coca-Cola" which tells all about this delicious beverage and why it is so pure, wholesome and refreshing.

Are you ever hot-tired-thirsty? Drink Coca-Cola—it is cooling, relieves fatigue and quenches the thirst. At soda fountains and carbonated in bottles—5c everywhere.

HE LIVED IN THE CITY.



Papa—Why can't we see the moon in the daytime?

Jimmie—Cause they don't light it up until after dark.

Didn't Care for Expenses.

They were seated at the breakfast table.

John, dear," said the young wife, "this is my birthday."

"I'm glad you mentioned it, darling," rejoined her husband. "I'll buy you a present the first thing when I get downtown."

"Well," she said, "I hope you won't get any cheap 98-cent affair."

"Of course, I won't," he replied.

"Why, I would be ashamed to present you with anything that cost less than a dollar."

Novelty.

"I thought you told me you had something original in this libretto," said the manager, scornfully. "Here at the very outset you have a lot of merry villagers singing, 'We are happy and gay!'"

"You don't catch the idea at all," replied the poet, wearily. "The 'g' is soft. It should be pronounced 'happy and gay'."

Not an Objection.

"I think he'd like to join your club, but his wife wouldn't hear of it."

"She wouldn't hear of it? Why, I know of half a dozen men who would join our club if their wives couldn't hear of it."

Autoing and Optics.

"Is not auto driving terribly hard on the eyes?" we asked.

"Well, I guess not," replied the chauffeur, withering us with scorn.

"Why, before I got to runnin' a car I was thinkin' or gettin' specks, my eyesight was that poor I couldn't see the contribution box in church until it was so near past me it was too late to dig for any money. But I hadn't been runnin' that wagon two days till I could see a policeman's little finger stickin' out from behind a tree four miles away. I could even see which way a copper's eyeballs were turned if he was standin' in the shade three miles off. Hard on the eyes! Well, not much! It's the best medicine for weak eyes that was ever invented, don't you forget it."

Their Object.

Banks—The women of my town have formed a secret society.

Rivers—A secret society? Surely, that's a misnomer; women don't know how to keep secrets.

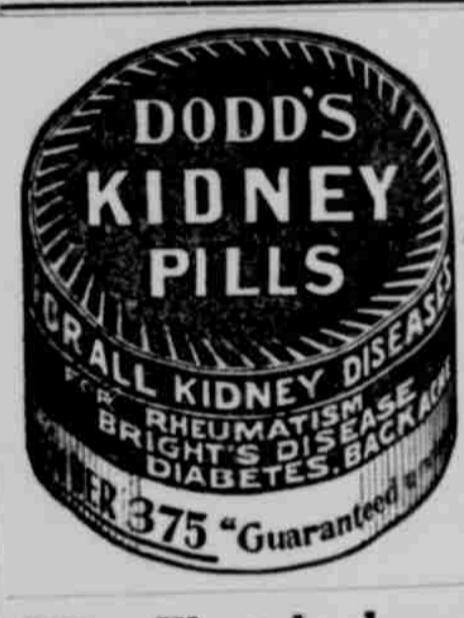
Banks—But they know how to tell them, and that's why they formed the society.

Otherwise Hopeless.

"My daughter's voice is to be tried today."

"Have you fixed the jury?"—Cleveland Leader.

We live truly in proportion as we go out of ourselves and enter into the fulness of the experience of those whom we serve, and by whom in turn we are served—Westcott.



The Wretched