

## THE DAIRY.

Skim-milk has high nutritive value, don't waste it.

Will the cream you are selling grade No. 1? If not, why not?

Cool the milk as soon as it is drawn, but be sure that the cooling process is carried on in a clean place that is free from objectionable odors.

Water hemlock and wild parsnip found growing in some swamp or low-lying lands have been responsible for the loss of many head of stock.

High quality butter and cheese are made from first grade cream and milk. Are you looking after your cream and milk in the most approved manner?

Don't turn the milk cows into the woods if there is danger of them getting a feed of leeks. One lot of tainted milk may injure an entire vatful at the factory.

Don't be in a hurry to turn the cows on grass. The cream or milk cheque will be larger through the summer if the grass gets a good start than if it is kept cropped close.

M. D. Munn of St. Paul, Minn., was re-elected President of the American Jersey Cattle Club at the annual meeting of the Club. In 1917 44,887 Jerseys were registered and 35,884 transfers recorded. This is an increase of 24 per cent. in registrations over the preceding year.

Give the spring calf a chance and this means feeding whole milk for the first two or three weeks and then gradually weaning it on to skim-milk. You cannot sell all the whole milk and expect to raise as thrifty a calf as your neighbor who does not stint on the amount of milk fed the youngsters.

More dairy products might advisedly be used on many farms. Milk, butter and cheese are foods of the first order, but yet the first and last mentioned are sparingly used in too many homes. Use milk as a beverage and cheese as a substitute for meat. Compared with the price of most drinks and foods they are not expensive.

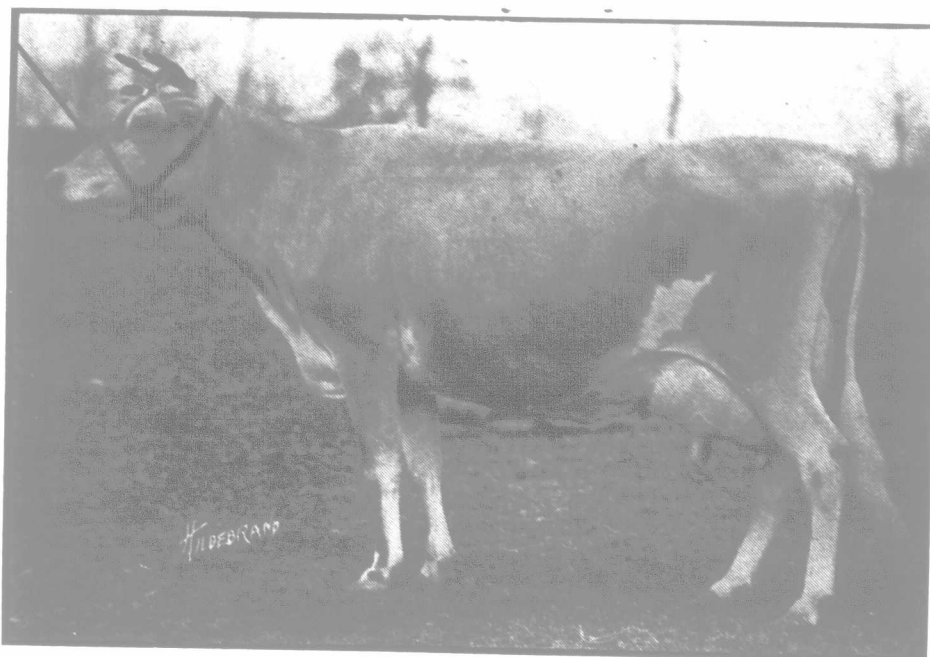
From March 20 to May 4, 18 Ayrshire cows and heifers qualified in the record of performance test. There were 7 mature cows qualifying. White Leg Kirsty was first 11,782 lbs. of milk and 424 lbs. of fat, in 304 days. She was closely followed by Flavia 3rd of Ottawa, with a record of 10,880 lbs. of milk and 408 lbs. of fat in 328 days. Hall Kate 4th headed the the four-year-old class with 8,972 lbs. milk and 370 lbs. fat in 323 days. Her test was 4.12. Kathleen was first in the three-year-old class; she gave 7,886 lbs. of milk and 314 lbs. of fat in 327 days. The two-year-old class was headed by Acmelea Denty Cora. This heifer gave 7,931 lbs. milk and 283 lbs. of fat in 304 days.

### Milk Fat Essential to Health.

A good deal of study has been put on the question of balanced rations and the nutritive value of feeds. Tests and experiments have been conducted in practically every country in order that it may be definitely ascertained what foods or combination of foods would be best for animals or for human beings. Dr. E. V. McCollum, of the John Hopkins University, has been carrying on a number of experiments along this line, and has proven that the fat of milk is essential to the proper development of the human being. It contains something which is only found in milk fat and in some leaves. In an address before the National Dairy Conference, recently held, Dr. McCollum outlined some of the results of his investigations. It was pointed out that we have had available for human nutrition plenty of cereal grains, such vegetables as beans and peas, products from the dairy industry and from the meat industry. With the plentiful supply of foodstuffs from different sources, the Doctor did not wonder that we had overlooked the fact that the protein content, the energy content and the digestibility was not the whole story in nutrition. Chance took care in a general way of all the errors into which we might have fallen had our diet been of a more restricted character. There are certain diseases peculiar to a faulty diet, one of which is known as beriberi, which has been common for centuries among rice-eating peoples. These people have never attained the size that has been attained in this country, and have not progressed in literature and science. To the Doctor's knowledge this trouble has never occurred in the northern part of the continent where there was a variety of diet. Another disease of dietary origin mentioned was scurvy, which used to be quite prevalent among sailors restricted to a diet of sea biscuit and salt pork for many weeks or months. Fresh vegetables or fruit juices soon brought about recovery. Another disease which is believed to be due to a faulty diet is that known as rickets. The Doctor mentioned certain districts in New York where practically one hundred per cent. of the children had crooked legs and backs, and grew up into deformed adults, or else died in infancy, largely as a result of faulty diet. These things are being studied and an effort is being made to discover the substance which is lacking. Experiments have been conducted with animals, feeding some entirely on the wheat plant, others on the

corn plant and others on the oat plant. Certain calves were selected and fed on these rations, in order to see what would happen. Those fed on the wheat plant as the sole source of nutriment did not look as well as the others, and an endeavor was made to find out what was wrong with the wheat ration. These calves grew up and their first progeny only weighed about half as much as they should. With the oat-fed animals there was a little better result. The calves were normal in weight but were either dead when born or died within twenty-four hours after birth. Those fed on the corn plant entirely were the best, and the calves were vigorous and quite strong. With this information on hand, the Doctor and others commenced making a study of the problems of nutrition in order to determine what was the most simple ration on which one could get animals to grow. Different quantities of starches, sugars, fats and inorganic salts were fed in different proportions. After five or six years of investigating, it has turned out that in addition to the recognized constituents of the diet starches, fats and protein there are two other things which are necessary and they have been designated as vitamins. One of these is most obtainable in the fat of milk and is found associated with other fats, as the egg yolk and the fats out the the glandular organs, such as liver and kidneys. These fats would permit of growth when put into a diet, provided the diet was right in every other respect. This substance is not obtainable in any vegetable fat.

After continued experiments with the wheat plant, the conclusion was arrived at that its inorganic content was unsatisfactory, that it lacked the unknown substance furnished by butter-fat, and that its protein was of poor quality. It has been found that the proteins in the vegetable world do not compare with those of the animal world. The Doctor continued: "There are three mineral elements which have to be added to any seed to make it complete, those are calcium—the principal element in lime, and the two elements which are present in table salt—sodium and chlorine. You must add all three of them; any pair will not do, and you must add the same three for any seed that we have studied. Every seed lacks a sufficient amount of that unknown sub-



Oxford's Briar Flower.

Purchased at the Butler sale for \$10,000 by Wm. Ross Procter. The highest price for Jersey cow in history.

stance in butter-fat to induce normal growth and prolong well being." When an animal is starved for one of these unknowns, he gets paralysis. When there is a lack in the diet the tissues surrounding the eyes swell up and the eyelids are badly inflamed. In the course of three or four weeks, if nothing is done, the animal will die, but if, within three or four days of death from a lack of this unknown substance that butter-fat is rich in, it will recover if an adequate amount of butter-fat is given. Thus the importance of butter-fat is clearly shown. The following paragraph from the Doctor's address also shows the importance of butter-fat for human beings: "A case was reported in 1906 by a Japanese physician named Mori when it was noted among a class of Japanese who were living on a diet of leaves, seeds, roots, tubers and meat. In other words, they did not have dairy products. There were approximately 400 cases of children who had eye trouble and the case was described exactly as we had found out experimentally, before we knew anything of his results. We had proved that the trouble resulted in an animal due to lack of the substance in butter-fat, so that we could cure an animal's eyes right up with butter-fat. The cure for the eye trouble in these children at that time was to give them chicken livers but we found that the fats out of the glandular organs of an animal will cure that eye trouble the same as butter-fat. But the vegetable fats will not cure the trouble no matter how much is used." The results of these experiments are a strong argument in favor of the use of butter. The substitutes which are made from vegetable oils or animal fats will not give the same results. Consequently, for growing children a liberal quantity of milk-fat should be given. The same holds good with adults, although they are in a position to use some of the substitutes to better advantage than the children.

### Oat and Pea Silage.

EDITOR "THE FARMER'S ADVOCATE":

It may be of interest to some of your readers to know what cattle will do on oat and pea silage, with no other roughage. In January last I had used up all my hay and was unable to procure any except timothy at \$30 per ton, which seemed to me to be throwing money away to feed to cows and young dairy heifers. I have, therefore, fed nothing since but silage (oats and peas) for nearly three months and my cattle lick it up cleaner now than they have done all winter. I have six milkers, four heifers nearly two years old, and twelve or fourteen from six months old up. The milkers received in addition four or five pounds of bran each daily. They had been in milk on an average of seven months, and averaged 23 pounds of milk daily. The bottom ten feet in the silo was fairly well matured and the grain was well filled, though the straw was not very yellow. I feed a limited quantity to my hogs and brood sows and they eat it with a relish. The oats and peas are soft enough for them to digest readily.

B. C.

T. K.

### Loafing Animals.

The term "loafer" applies usually to an idle person, or to one who would rather beg than work. In many herds there are animals which answer to this description; they do not do sufficient work to pay for the feed which they consume, and it is a case of the dairymen keeping the cow instead of the cow keeping him. If there were fewer loafers in the dairy herds of Ontario, the average production per cow would be greatly increased and the financial returns of the dairymen improved to that extent. No man can afford to keep a cow in his herd which does not produce sufficient milk and fat to pay for her feed, the labor involved in looking after her, and giving an allowance for interest on investment, etc.

Some dairymen have found on starting to keep records that about one-half their herd was keeping the other half; thus bringing the profits to a minimum. By beefing the slackers and giving a little extra feed to the best cows the labor income would be greatly increased. It is not the number in the herd that counts as much as the quality of the individuals in the herd. With feed and labor at the price they are at present, a cow must give a fairly good flow of milk in order to meet expenses with the prevailing prices of dairy products. There is too much guessing as to what an animal will produce, and as a result inferior cows from the production standpoint are retained in the herd. If daily records were kept the dairyman would know at a glance what every cow was doing. He would then be in a position to feed according to production and to cull out the members of the herd which did not come up to a certain standard. No dairy farmer can afford to have loafers in his herd.

### Jerseys Bring a Big Figure.

A new record for Jersey prices was made at the Edmond Butler sale at Mt. Kisco, N.Y., when 62 head brought \$60,115. As high as \$10,000 was paid for a single individual. This cow, Oxford Briar Flower, is a daughter of that famous bull, Oxford Majesty. Among some of the other high-priced animals were Oxford Gipsy Lad, which went under the hammer at \$2,700, and Greenfield Brand, at \$2,610. There were several Canadian breeders at the sale, who secured some of the choice individuals. The firm of B. H. Bull & Son purchased Les Prairies Bessie for Arthur T. Little of London at \$2,200, and secured two other cows for their own herd at \$875 and \$750 respectively. Eventide's Lassie went to the bid of John Pringle, of London, for \$1,750.

In Kansas, the Holstein breeders recently held their consignment sale and 83 head made an average of \$326.

The Ohio Holstein-Friesian Breeders' Association sold 123 animals at an average of \$252, at their spring sale. The top price was \$600 for the female, Oakdale Hengerveld Segis.

At the dispersal sale of Holsteins held by the Lawson-Holding Company, Poughkeepsie, N. Y., 97 animals made an average price of \$496. The highest was \$15,600 for a half interest in the bull King Segis Pontiac Alcatraz.

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