

Livestock and Dairy

Facts About Care of Farmers' Feeders and Aids to Greater Milk Production.

THE dairy industry falls naturally in two divisions, namely, dairy-farming and dairy manufacture. The Washington State College, Dairy Department, follows this plan in its instruction:

The work of giving milk tests and running hand separators, which was given in the earlier life of this department, of the college is still given; but in addition, it is realized that students must have actual practice in the feeding and testing of cows. Students are required to spend at least three whole days—six different milkings—at the dairy stables. They must be present at the milking, weigh the milk and test each lot of milk for fat, figure how much fat the cow gives for the day, and for the three days. Each student is given four cows. They weigh the silage, hay and grain every cow eats, and at the end of the time, obtain the prices of the different feeds and determine whether or not the cow is making a profit.

In milk inspection, the students are given score cards and score dairies in the vicinity, and make suggestions for improvements in each case. In the laboratory the students also are given samples of milk, of which they determine the bacterial count, sediment test, and so on, the same as is done in the inspection work of the larger cities of the country.

Dairy Barn Plans.

They make dairy barn plans, showing not only the arrangement of the interior, but also giving the estimate of the cost of instruction. In the work in market milk production, students pasteurize, standardize and bottle milk. The demand for different kinds of milk varies. Some patrons like a high percent of fat in the milk, and are willing to pay for it. Others merely want the legal standard. It is therefore necessary to make two or even three grades of milk. All milk is run through a clarifier, thereby taking out the sediment and making it more wholesome.

The dairy department receives cream from about three hundred patrons, half in Idaho and half in Washington. The patrons are scattered in an area surrounding Pullman for about twenty-five miles in all directions. This not only gives the farmers a chance to market their products, but gives the students enough milk to work with. About fifty thousand pounds of butter and six thousand gallons of cream are turned out. The work is done mainly by students. They study the methods of handling patrons, keeping the accounts of patrons, and so on.

The college is located in the heart of the extensive grain producing region of Eastern Washington; yet, in the short time the department has undertaken operations on the present large scale, the number of cows within a twenty-five mile radius of Pullman have doubled, and a good cow in this region now commands a much higher price than a few years ago. Many farmers have shipped in good cows, brought in breeding stock to build up their herds, and are rapidly turning toward dairying and live-stock production, who a few years ago were heedless of the opportunity in this direction.

Attitude of Farmers.

Some interesting facts concerning the attitude of farmers toward this type of farming is gleaned from the experience of the Dairy Department. The farmers as a rule desire to know and to be shown that they are getting honest treatment. If a farmer believes he is not receiving his due for any crop, he will turn from the crop, and this is particularly true of the dairy business in a country wherein dairying does not have a strong foothold.

There are several margins of error in which creamery operators may, intentionally or unintentionally, deceive their patrons. One is in inaccurate weights. Another abuse, more prevalent perhaps, is the erroneous test. Not understanding the test of cream—as he too often does not—the farmer would assume that cream is tested the same as milk. Cream should not be measured the same as milk, but, rather, should be weighed out on a delicate balance so that the exact amount of cream will be in the test bottle. On account of the variability of

the fat content, and therefore the variability of any definite volume of cream this error is exceedingly great; that is the cream testing in the neighborhood of forty per cent by accurate test will test only about thirty-five per cent if tested as the milk is tested. If the farmer does not understand that there is a difference in the testing of milk and of cream, he might be led to believe that the thirty-five per cent is correct.

Errors in Reading.

Another margin of error is in the reading of the test, which must be made at a temperature between 120 and 140 degrees Fahrenheit. If the reading is done at a lower temperature, the fat will contract and show a low reading; and, on the other hand, if done at a higher temperature, the fat will expand and show a high reading. After the completion of the test, it is necessary to temper the test tubes by placing them in water at a temperature of 120 to 140, so that the fat will be at that temperature when the reading is taken. A variation of one to three per cent might be expected in a variation of ten to thirty degrees of temperature.

By instructing the patrons as to what errors are possible, and showing them that it is to their interest to see that this testing is carried on properly, the confidence of the patrons is obtained; which is highly important in the up-building of a dairy community.

The State College sends out supervisors who are interested in the dairy work and who want to study dairy stock and methods of management. Twenty different breeders of pure stock in Washington are now requesting and receiving these official tests.

Students' Opportunity.

It is found that two or three days to a week are usually spent at one farm. Thus the student is given a chance not only to observe the cattle from the standpoint of type, but also is given practice in official testing; and, above all, is given a chance to discuss with the breeder his methods of breeding and management, which is useful experience to the student and is impossible to obtain in the ordinary class room and laboratory work of the college. The Department of Dairying figures that a week spent by a student out in the field is worth a month at the college. They get accurate ideas concerning the scoring of stock, of barns and dairies, and in the manufacture of butter, ice cream and cheese, and the dairy business in general. Some of the cows the students score in their trips are the best in the world. For example: Lily of Willowmore, an Ayrshire owned by J. W. Clise, of Seattle, and that yielded 22,106 pounds of milk in a year; Netherall Brownie, also in the Clise herd at Redmond, Washington, yielding 18,100 pounds of milk. The champion four-year-old Holstein cow in the world—Bessie Homestead—is owned by David Monroe, of Spokane. She produced 34.95 pounds of butter in seven days. Margie Newman, owned by Charles Eldridge, of Chimacum, produced 3,555 pounds of milk in 30 days. Hazelwood Aggie De Kol, of the Hazelwood herd at Spokane, yielded 624.8 pounds of milk and 34.9 pounds of butter in seven days.

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A Fifteen-Thousand-Dollar Cow.

THIS picture of the World's Record Cow was recently secured by the Geo. R. Mokel Cow Co. for the exclusive use of this Magazine. Her name is Elzevère Barnum De Kol and she is a registered Holstein Friesian. This cow recently sold for \$15,000. She is the mother of six daughters (all record-breakers) and one son. Here is her record for one month:

Milk	2294.30 pounds
Butter	115.23 pounds
Average Butter Fat	4.02 pounds

Oregon and Washington can and will soon be producing cows of a similar grade.

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